10/730,010

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     (FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005
L1       1303457 S KINASE?
L2        431794 S SERINE OR THREONINE
L3        107695 S L1 AND L2
L4         44729 S HUMAN AND L3
L5       7008658 S CLON? OR EXPRESS? OR RECOMBINANT
L6            23 S HUMAN (A)L1(A)L2
L7            23 DUP REM L6 (0 DUPLICATES REMOVED)
L8         26206 S L4 AND L5
L9         13226 S "CHROMOSOME 13"
L10           23 S L8 AND L9
L11           15 DUP REM L10 (8 DUPLICATES REMOVED)
L12      3112750 S LUNG OR CARCINOMA OR PLACENTA
L13         3424 S L8 AND L12
L14           12 S L6 AND L13
L15           12 DUP REM L14 (0 DUPLICATES REMOVED)
                 E WEBSTER M/AU
L16          853 S E3
                 E YAN C/AU
L17         1118 S E3
                 E DIFRANCESCO V/AU
L18          117 S E3-E4
                 E BEASLEY E/AU
L19           29 S E3
L20         2087 S L16 OR L17 OR L18 OR L19
L21           10 S L8 AND L20
L22            8 DUP REM L21 (2 DUPLICATES REMOVED)

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                  (ROSPATENT) added to list of core patent offices covered
 NEWS  4  FEB 28  PATDPAFULL - New display fields provide for legal status
                  data from INPADOC
 NEWS  5  FEB 28  BABS - Current-awareness alerts (SDIs) available
 NEWS  6  FEB 28  MEDLINE/LMEDLINE reloaded
 NEWS  7  MAR 02  GBFULL: New full-text patent database on STN
 NEWS  8  MAR 03  REGISTRY/ZREGISTRY - Sequence annotations enhanced
 NEWS  9  MAR 03  MEDLINE file segment of TOXCENTER reloaded
 NEWS  10 MAR 22  KOREAPAT now updated monthly; patent information enhanced
 NEWS  11 MAR 22  Original IDE display format returns to REGISTRY/ZREGISTRY
 NEWS  12 MAR 22  PATDPASPC - New patent database available
 NEWS  13 MAR 22  REGISTRY/ZREGISTRY enhanced with experimental property tags
 NEWS  14 APR 04  EPFULL enhanced with additional patent information and new
                  fields
 NEWS  15 APR 04  EMBASE - Database reloaded and enhanced

 NEWS EXPRESS  JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005

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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21
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FILE 'HCAPLUS' ENTERED AT 15:14:52 ON 07 APR 2005
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FILE 'LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005
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=> s kinase?
L1     1303457 KINASE?

=> s serine or threonine
L2      431794 SERINE OR THREONINE

=> s l1 and l2
L3      107695 L1 AND L2

=> s human and l3
   6 FILES SEARCHED...
L4       44729 HUMAN AND L3

=> s clon? or express? or recombinant
   5 FILES SEARCHED...
L5     7008658 CLON? OR EXPRESS? OR RECOMBINANT

=> s human (a)l1(a)l2
L6           23 HUMAN (A) L1(A) L2

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7           23 DUP REM L6 (0 DUPLICATES REMOVED)

=> d 1-23 ibib ab

L7   ANSWER 1 OF 23  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:141228  HCAPLUS
DOCUMENT NUMBER:          142:234465
TITLE:                    Human serine/threonine kinase Pim-3 showing aberrant
                          expression in hepatocellular carcinoma development and
                          its utility as hepatoma marker
INVENTOR(S):              Mukaida, Naofumi; Hujii, Chifumi; Hirose, Kunitaka
PATENT ASSIGNEE(S):       Kureha Chemical Industry Company, Limited, Japan
SOURCE:                   PCT Int. Appl., 61 pp.
```

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005014809	A1	20050217	WO 2004-JP11669	20040806

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-291060 A 20030811

AB This invention provides a polypeptide specific to liver cancer, a polynucleotide encoding the polypeptide, and recombinant expression. RNA mol. inhibiting the expression of the polypeptide and therapeutic use, are claimed. Antibodies, particularly monoclonal antibodies specific to the polypeptide and use as diagnostic agent for liver cancer are also claimed. PCR primers for detecting the gene are provided. Most cases of human hepatocellular carcinoma develop after persistent chronic infection with human hepatitis B virus or hepatitis C virus, and host responses are presumed to have major roles in this process. To recapitulate this process, the authors have developed the mouse model of hepatocellular carcinoma using hepatitis B virus surface antigen transgenic mice. To identify the genes associated with hepatocarcinogenesis in this model, they compared the gene expression patterns between pre-malignant lesions surrounded by hepatocellular carcinoma tissues and control liver tissues by using a fluorescent differential display anal. Among the genes that were expressed differentially in the pre-malignant lesions, they focused on Pim-3, a member of a proto-oncogene Pim family, because its contribution to hepatocarcinogenesis remains unknown. Moreover, the unavailability of the nucleotide sequence of full-length human Pim-3 cDNA prompted us to clone it from the cDNA library constructed from a human hepatoma cell line, HepG2. The obtained 2,392 bp human Pim-3 cDNA encodes a predicted open reading frame consisting of 326 amino acids. Pim-3 mRNA was selectively expressed in human hepatoma cell lines, but not in normal liver tissues. Moreover, Pim-3 protein was detected in human hepatocellular carcinoma tissues and cell lines but not in normal hepatocytes. Furthermore, cell proliferation was attenuated and apoptosis was enhanced in human hepatoma cell lines by the ablation of Pim-3 gene with RNA interference. These observations suggest that aberrantly expressed Pim-3 can cause autonomous cell proliferation or prevent apoptosis in hepatoma cell lines.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:515644 HCAPLUS
DOCUMENT NUMBER: 141:65052
TITLE: Methods for the identification, assessment, and treatment of patients with proteasome inhibition therapy
INVENTOR(S): Mulligan, George; Bryant, Barbara M.; Morrissey, Michael P.; Bolt, Andrew; Damokosh, Andrew I.
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc., USA

SOURCE: PCT Int. Appl., 178 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004053066	A2	20040624	WO 2003-US38539	20031204

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004156854	A1	20040812	US 2003-728055	20031204

PRIORITY APPLN. INFO.: US 2002-431514P P 20021206

AB The present invention is directed to the identification of markers that can be used to determine whether patients with cancer are clin. responsive or non-responsive to a therapeutic regimen prior to treatment. In particular, the present invention is directed to the use of certain combinations of markers, wherein the expression of the markers correlates with responsiveness or non-responsiveness to a therapeutic regimen comprising proteasome inhibition. Thus, by examining the expression levels of individual markers and those comprising a marker set, it is possible to determine whether a therapeutic agent, or combination of agents, will be most likely to reduce the growth rate of tumors in a clin. setting.

L7 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:371153 HCAPLUS
DOCUMENT NUMBER: 140:371494
TITLE: Binary prediction tree modeling with many predictors and its uses in clinical and genomic applications
INVENTOR(S): Nevins, Joseph R.; West, Mike; Huang, Andrew T.
PATENT ASSIGNEE(S): Duke University, USA
SOURCE: PCT Int. Appl., 886 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004038376	A2	20040506	WO 2003-US33946	20031024
WO 2004038376	A3	20040826		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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WO 2004038376 A2 20040506 WO 2003-XA33946 20031024
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
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WO 2004038376 A2 20040506 WO 2003-XB33946 20031024
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2002-420729P	P	20021024
US 2002-421062P	P	20021025
US 2002-421102P	P	20021025
US 2002-424701P	P	20021108
US 2002-424715P	P	20021108
US 2002-424718P	P	20021108
US 2002-425256P	P	20021112
US 2003-448461P	P	20030221
US 2003-448462P	P	20030221
US 2003-457877P	P	20030327
US 2003-458373P	P	20030331
WO 2003-US33946	A	20031024

AB The statistical anal. described and claimed is a predictive statistical tree model that overcomes several problems observed in prior statistical models and regression analyses, while ensuring greater accuracy and predictive capabilities. Although the claimed use of the predictive statistical tree model described herein is directed to the prediction of a disease in individuals, the claimed model can be used for a variety of applications including the prediction of disease states, susceptibility of disease states or any other biol. state of interest, as well as other applicable non-biol. states of interest. This model first screens genes to reduce noise, applies kmeans correlation-based clustering targeting a large number of clusters, and then uses singular value decompns. (SVD) to extract the single dominant factor (principal component) from each cluster. This generates a statistically significant number of cluster-derived singular factors, that are referred to as metagenes, that characterize multiple patterns of expression of the genes across samples. The strategy aims to extract multiple such patterns while reducing dimension and smoothing out gene-specific noise through the aggregation within clusters. Formal predictive anal. then uses these metagenes in a Bayesian classification tree anal. This generates multiple recursive partitions of the sample into subgroups (the 'leaves' of the classification tree), and assocs. Bayesian predictive probabilities of outcomes with each subgroup. Overall predictions for an individual sample are then generated by averaging predictions, with appropriate wts., across many such tree models. The model includes the use of iterative out-of-sample, cross-validation predictions leaving each sample out of the data set one at a time, refitting the model from the remaining samples and using it to predict the

hold-out case. This rigorously tests the predictive value of a model and mirrors the real-world prognostic context where prediction of new cases as they arise is the major goal.

L7 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:356640 HCAPLUS
DOCUMENT NUMBER: 138:380471
TITLE: Genes that are differentially expressed during erythropoiesis and their diagnostic and therapeutic uses
INVENTOR(S): Brissette, William H.; Neote, Kuldeep S.; Zagouras, Panayiotis; Zenke, Martin; Lemke, Britt; Hacker, Christine
PATENT ASSIGNEE(S): Pfizer Products Inc., USA; Max-Delbrueck-Centrum Fuer Molekulare Medizin
SOURCE: PCT Int. Appl., 285 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003038130	A2	20030508	WO 2002-US34888	20021031
WO 2003038130	A3	20040212		
WO 2003038130	C1	20040422		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2003038130	A2	20030508	WO 2002-XA34888	20021031
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004014064	A1	20040122	US 2002-285366	20021031
EP 1446507	A2	20040818	EP 2002-798424	20021031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				

PRIORITY APPLN. INFO.:		
US 2001-335048P	P	20011031
US 2001-335183P	P	20011102
WO 2002-US34888	A	20021031

AB The present invention provides mol. targets that regulate erythropoiesis. Groups of genes or their encoded gene products comprise panels of the invention and may be used in therapeutic intervention, therapeutic agent screening, and in diagnostic methods for diseases and/or disorders of erythropoiesis. The panels were discovered using gene expression profiling of erythroid progenitors with Affymetrix HU6800 and HG-U95Av2 chips. Cells from an in vitro growth and differentiation system of

SCF-Epo dependent human erythroid progenitors, E-cadherin+/CD36+ progenitors, cord blood, or CD34+ peripheral blood stem cells were analyzed. The HU6800 chip contains probes from 13,000 genes with a potential role in cell growth, proliferation, and differentiation and the HG-U95Av2 chip contains 12,000 full-length, functionally-characterized genes. This abstract record is one of two records for this document necessitated by the large number of index entries required to fully index the
document and publication system constraints.

L7 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:221864 HCAPLUS
DOCUMENT NUMBER: 138:249732
TITLE: Gene expression profiling for identification of disease genes for use in drug screening and therapy
INVENTOR(S): Bristow, Michael R.; Minobe, Wayne A.; Lowes, Brian D.; Perryman, Benjamin M.
PATENT ASSIGNEE(S): The Regents of the University of Colorado, USA
SOURCE: PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003023066	A1	20030320	WO 2002-US28808	20020911
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003096782	A1	20030522	US 2002-241368	20020911
EP 1434876	A1	20040707	EP 2002-757676	20020911
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005502367	T2	20050127	JP 2003-527128	20020911
PRIORITY APPLN. INFO.:			US 2001-318854P P	20010911
			WO 2002-US28808 W	20020911

AB A method for identifying genes involved in development, progression, and/or maintenance of a disease comprises comparison of gene expression profiles of samples from healthy and diseased subjects and/or from treated and untreated diseased subjects. The methods may be applied to the identification of genes involved in cardiac disease states. Through the identification of new targets, addnl. methods for drug screening and therapy also are provided. Thus, the method was applied to patients exhibiting dilated cardiomyopathy and those with the disease after treatment with β-blockers. One hundred thirty six genes which were up- or down-regulated were identified.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:777245 HCAPLUS
DOCUMENT NUMBER: 139:287957
TITLE: Regulation of HIV-Tat and NEF by PAK4 kinase and its

binding partners and methods of identifying modulators thereof

INVENTOR(S): Melnick, Michael B.; Moritz, Albrecht; Comb, Michael J.

PATENT ASSIGNEE(S): Cell Signaling Technology, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 47 pp., Cont.-in-part of U.S. Ser. No. 750,457, abandoned.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003186254	A1	20031002	US 2002-134102	20020429
PRIORITY APPLN. INFO.:			US 1999-173939P	P 19991230
			US 2000-750457	B2 20001228

AB The present invention discloses complexes of cellular signaling proteins that interact in vivo with the HIV-encoded auxiliary proteins Nef and Tat to modulate their activity. This complex includes the novel serine/threonine kinase PAK4 and the novel guanine nucleotide exchange factor Cdc42-GEF, which synergize to stimulate Tat transcriptional activity, and the acetyl-transferase Tip60 which modifies Nef. These cellular partners of the HIV auxiliary proteins represent novel targets for HIV therapeutics. The invention provides isolated DNA and vectors encoding PAK4 and Cdc42-GEF, and methods of producing recombinant forms of these proteins. The invention also provides methods for identifying compds. that modulate the activity of HIV-Tat, HIV-Nef or Tip60, and methods for modulating the activity of these enzymes.

L7 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:575214 HCAPLUS

DOCUMENT NUMBER: 137:136129

TITLE: Human protein kinase and the cDNA and genomic DNA encoding the protein kinase

INVENTOR(S): Beasley, Ellen M.; Ye, Jane; Yan, Chunhua; Ketchum, Karen A.; Di Francesco, Valentina

PATENT ASSIGNEE(S): PE Corporation (NY), USA

SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002059288	A2	20020801	WO 2002-US930	20020115
WO 2002059288	A3	20030410		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003022337	A1	20030130	US 2001-819607	20010329
US 6686176	B2	20040203		
CA 2435508	AA	20020801	CA 2002-2435508	20020115

EP 1356027 A2 20031029 EP 2002-705765 20020115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2004067568 A1 20040408 US 2003-633631 20030805
PRIORITY APPLN. INFO.: US 2001-263162P P 20010123
US 2001-819607 A 20010329
WO 2002-US930 W 20020115

AB The present invention provides the amino acid sequence a human protein, and encoding gene and cDNA sequences, that shows a particularly high degree of similarity to the the serine/threonine protein kinase EVC gene which is associated with Ellis-van Creveld syndrome and Weyers acrodental dysostosis. Exptl. data indicates expression in humans in prostate, lung, and whole brain. The present invention specifically provides isolated peptide and nucleic acid mols., methods of identifying orthologs and paralogs of the kinase peptides, and methods of identifying modulators of the kinase peptides.

L7 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:522007 HCAPLUS
DOCUMENT NUMBER: 137:74476
TITLE: Human serine-threonine protein kinase and cDNAs and drug screening targeted to its regulation and other therapeutic application for related diseases
INVENTOR(S): Koehler, Rainer H.
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053749	A2	20020711	WO 2001-EP15320	20011227
WO 2002053749	A3	20021205		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2001-259215P P 20010103
US 2001-306468P P 20010720
US 2001-308098P P 20010730

AB Two human serine-threonine protein kinase and cDNA, related proteins retrieved from sequence homolog anal., are disclosed. Their mRNA expression profile in various human tissues is provided. Methods for expressing and preparing related products using recombinant cells are described. These recombinant cells, the enzyme, or nucleic acids encoding the enzyme are useful in screening for modulators of the enzymic activity or gene expression. Methods of screening for its modulators and using them for the treatment of various disease and their effectiveness (in vivo testing of compds./target validation) are described. Reagents that regulate human serine-threonine protein kinase and reagents which bind to human serine-threonine protein kinase gene products can play a role in preventing, ameliorating, or correcting dysfunctions or diseases including, but not limited to, cancer, diabetes, COPD, and peripheral and central nervous system disorders.

L7 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:640474 HCAPLUS
DOCUMENT NUMBER: 138:22553
TITLE: Human TPX2 is required for targeting Aurora-A kinase to the spindle
AUTHOR(S): Kufer, Thomas A.; Sillje, Herman H. W.; Korner, Roman; Gruss, Oliver J.; Meraldi, Patrick; Nigg, Erich A.
CORPORATE SOURCE: Department of Cell Biology, Max Planck Institute of Biochemistry, Martinsried, D-82152, Germany
SOURCE: Journal of Cell Biology (2002), 158(4), 617-623
CODEN: JCLBA3; ISSN: 0021-9525
PUBLISHER: Rockefeller University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Aurora-A is a serine-threonine kinase implicated in the assembly and maintenance of the mitotic spindle. Here we show that human Aurora-A binds to TPX2, a prominent component of the spindle apparatus TPX2 was identified by mass spectrometry as a major protein coimmunopptg. specifically with Aurora-A from mitotic HeLa cell exts. Conversely, Aurora-A could be detected in TPX2 immunoppts. This indicates that subpopulations of these two proteins undergo complex formation in vivo. Binding studies demonstrated that the N-terminal of TPX2 can directly interact with the COOH-terminal catalytic domain of Aurora-A. Although kinase activity was not required for this interaction, TPX2 was readily phosphorylated by Aurora-A. Upon siRNA-mediated elimination of TPX2 from cells, the association of Aurora-A with the spindle microtubules was abolished, although its association with spindle poles was unaffected. Conversely, depletion of Aurora-A by siRNA had no detectable influence on the localization of TPX2. We propose that human TPX2 is required for targeting Aurora-A kinase to the spindle apparatus In turn, Aurora-A might regulate the function of TPX2 during spindle assembly.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:784251 HCAPLUS
DOCUMENT NUMBER: 132:19663
TITLE: human Pak4 novel gene encoding a serine/threonine kinase useful as tumor cell inhibitor and active in induction of filopodia and actin cytoskeleton polymerization
INVENTOR(S): Minden, Audrey
PATENT ASSIGNEE(S): The Trustees of Columbia University In the City of New York, USA
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9963073	A1	19991209	WO 1999-US11341	19990521

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6013500	A	20000111	US 1998-82737		19980521
AU 9940947	A1	19991220	AU 1999-40947		19990521
US 6667168	B1	20031223	US 2000-718032		20001121
US 2004091992	A1	20040513	US 2003-693367		20031024
PRIORITY APPLN. INFO.:			US 1998-82737	A2	19980521
			WO 1999-US11341	W	19990521
			US 2000-718032	A3	20001121

AB This invention provides an isolated mammalian nucleic acid mol. encoding a PAK4 serine/threonine kinase. This invention provides an isolated nucleic acid mol. encoding a mutant homolog of the mammalian PAK4 serine/threonine kinase whose amino acid sequence is set forth. This invention provides a fusion protein comprising a PAK4 serine/threonine kinase or a fragment thereof and a second peptide. This invention provides a purified mammalian PAK4 serine/threonine kinase. This invention provides a protein comprising substantially the amino acid sequence set forth in Figure 1A. This invention provides a monoclonal antibody directed to an epitope of a PAK4 serine/threonine kinase. This invention provides a method of inhibiting PAK4 function comprising administering a ligand comprising an amino acid domain which binds to a GTP binding protein so as to inhibit binding of the GTP binding protein to PAK4. This invention provides a method of inhibiting PAK4 function comprising administering a ligand which binds to the GTP binding domain of PAK4 so as to inhibit PAK4 binding to a GTP binding protein. This invention provides a method of inhibiting PAK4 serine/threonine kinase function comprising administering a ligand which blocks an ATP binding domain so as to inhibit PAK4 serine/threonine kinase function. This invention provides a method of inhibiting growth of a tumor cell comprising blocking Cdc42Hs by administering a ligand capable of binding to a Cdc42Hs binding site of a PAK4 serine/threonine kinase. PAK4 was shown to interact with activated Cdc42Hs through GBD/CRIB domain and is recruited to the Golgi. PAK4 is involved with the actin cytoskeleton and activation of the JNK pathway. PAK4 induces actin polymerization and induces formation of filopodia. PAK4 is used as a tumor cell
inhibitor for cancer or arthritis. Mouse cDNA and protein fragments are also listed..

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1999:421789 HCAPLUS
DOCUMENT NUMBER:	131:55792
TITLE:	Cloning of cDNA for human STE20-like signal transduction serine/threonine kinase
INVENTOR(S):	Norris, Tyrell Errick; Moore, William Craig; Silberstein, David Shay
PATENT ASSIGNEE(S):	Zeneca Limited, UK
SOURCE:	PCT Int. Appl., 111 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9932637	A1	19990701	WO 1998-GB3793	19981217

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,

CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9916766	A1	19990712	AU 1999-16766	19981217
EP 1040194	A1	20001004	EP 1998-961306	19981217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002516064	T2	20020604	JP 2000-525556	19981217
PRIORITY APPLN. INFO.:			GB 1997-26851	A 19971219
			WO 1998-GB3793	W 19981217

AB A human signal-transduction kinase polypeptide is described which is expressed at a particularly high level in tissues of the human immune system. A full length cDNA which encodes a Ste20-like signal transduction serine/threonine kinase polypeptide is disclosed as well as the interior structural region and the amino acid residue sequence of the native biol. mol. Methods are provided to identify compds. that modulate the biol. activity of the human Ste20-like signal transduction serine/threonine kinase. Also described are antisense nucleic acid sequences capable of inhibiting expression of the kinase, a pharmaceutical composition containing a compound capable of modulating the the kinase activity, and a diagnostic kit containing antibodies to the kinase or PCR primers derived from the encoding cDNA.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:315403 HCAPLUS
DOCUMENT NUMBER: 131:99243
TITLE: Characterization of a novel type of serine/threonine kinase that specifically phosphorylates the human Goodpasture antigen
AUTHOR(S): Raya, Angel; Revert, Fernando; Navarro, Samuel; Saus, Juan
CORPORATE SOURCE: Fundacion Valenciana de Investigaciones Biomedicas, Instituto de Investigaciones Citologicas, Valencia, 46010, Spain
SOURCE: Journal of Biological Chemistry (1999), 274(18), 12642-12649
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Goodpasture disease is an autoimmune disorder that occurs naturally only in humans. Also exclusive to humans is the phosphorylation process that targets the unique N-terminal region of the Goodpasture antigen. Here the authors report the mol. cloning of GPBP (Goodpasture antigen-binding protein), a previously unknown 624-residue polypeptide. Although the predicted sequence does not meet the conventional structural requirements for a protein kinase, its recombinant counterpart specifically binds to and phosphorylates the exclusive N-terminal region of the human Goodpasture antigen in vitro. This novel kinase is widely expressed in human tissues but shows preferential expression in the histol. structures that are targets of common autoimmune responses. The work presented in this report highlights a novel gene to be explored in human autoimmunity.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:513247 HCAPLUS
DOCUMENT NUMBER: 129:240625
TITLE: Human ULK1, a novel serine/threonine kinase related to UNC-51 kinase of Caenorhabditis elegans: cDNA cloning, expression, and chromosomal assignment

AUTHOR(S): Kuroyanagi, Hidehito; Yan, Jin; Seki, Naohiko; Yamanouchi, Yasuko; Suzuki, Yo-ichi; Takano, Takako; Muramatsu, Masa-aki; Shirasawa, Takuji
CORPORATE SOURCE: Department of Mol. Genetics, Tokyo Metropolitan Inst. of Gerontology, Tokyo, 173-0015, Japan
SOURCE: Genomics (1998), 51(1), 76-85
CODEN: GNMCEP; ISSN: 0888-7543
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The unc-51 gene, isolated from mutants of Caenorhabditis elegans exhibiting abnormal axonal extension and growth, encodes a novel serine/threonine kinase (K. Ogura, et al., 1994, Genes Dev. 8: 2389-2400). Here we report the mol. cloning and characterization of the human homolog of UNC-51, designated ULK1, for UNC-51 (C. elegans)-like kinase 1. Sequence anal. of the human ULK1 cDNA showed that an open reading frame is composed of 1050 amino acids with a calculated MW of 112.6 kDa and a pI of 8.80. Homol. search anal. showed that ULK1 has 41% overall similarity to UNC-51 and 29% similarity to Apg1p of Saccharomyces cerevisiae. Phylogenetic anal. of ULK1, UNC-51, and Agg1p suggested that they constitute a novel subfamily of serine/threonine kinases. Southern blot analyses suggested that the ULK1 gene spans 30-40 kb in the human genome as a single-copy gene. Zoo blot anal. indicated that ULK1 kinase is conserved among vertebrates including mammals, birds, reptiles, amphibians, and fish. Northern blot anal. revealed that ULK1 is ubiquitously expressed in adult human tissues such as skeletal muscle, heart, pancreas, brain, placenta, liver, kidney, and lung, whereas UNC-51 is specifically detected in the nervous system of C. elegans. Both FISH and RH mapping confirmed the regional localization of ULK1 to human chromosome 12q24.3. (c) 1998 Academic Press.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:498524 HCAPLUS
DOCUMENT NUMBER: 125:215535
TITLE: prk, A cytokine-inducible human protein serine/threonine kinase whose expression appears to be down-regulated in lung carcinomas
AUTHOR(S): Li, Bo; Ouyang, Bin; Pan, Huiqi; Reissmann, Peter T.; Slamon, Dennis J.; Arceci, Robert; Lu, Luo; Dai, Wei
CORPORATE SOURCE: Div. Hematol. Oncol., Univ. Cincinnati Coll. Med., Cincinnati, OH, 45267, USA
SOURCE: Journal of Biological Chemistry (1996), 271(32), 19402-19408
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors have cloned and characterized a putative protein serine/threonine kinase termed prk through a combination of polymerase chain reaction and conventional cDNA library screening approaches. There are apparently two distinct domains within prk protein deduced from its nucleotide sequences. The amino-terminal portion has the feature of the catalytic domain of a serine/threonine kinase and shows strong homol. to mouse fnk and other polo family kinases including mouse snk, human and murine plk, Drosophila polo, and yeast Cdc5. The carboxyl-terminal portion, presumably the regulatory domain, shares extensive homol. to mouse fnk. Northern blotting analyses reveal that prk expression is restricted to a very limited number of tissues with placenta, ovaries, and lung containing detectable amts. of prk mRNA. Prk mRNA expression is also detected at a low level in the megakaryocytic cell line Dami, MO7e, and

three brain glioma cell lines. In addition, refeeding of serum-deprived MO7e, Dami, and K562 cells of hematopoietic origin and GM00637D of lung fibroblasts rapidly activates prk mRNA expression with its peak induction around 2 h after serum addition Prk gene activation by the serum requires no new protein synthesis. The recombinant cytokines such as interleukin-3 and thrombopoietin also activate prk mRNA expression in MO7e cells. Furthermore, a survey of RNAs isolated cancer patients reveals that prk mRNA expression is significantly down-regulated in tumor tissues. Southern blotting anal. indicates that the prk gene is present in a single copy in the genome of tumors and normal cells. Taken together, these results suggest that prk expression may be restricted to proliferating cells and involved in the regulation of cell cycle progression. The mol. cloning of prk cDNA will facilitate the study of its biol. role as well as its potential role in tumorigenesis.

L7 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:312447 HCAPLUS
DOCUMENT NUMBER: 125:27254
TITLE: Cloning and characterization of GRB14, a novel member of the GRB7 gene family
AUTHOR(S): Daly, Roger J.; Sanderson, Georgina M.; Janes, Peter W.; Sutherland, Robert L.
CORPORATE SOURCE: Cancer Biol. Div., Garvan Inst. Med. Res., New South Wales, 2010, Australia
SOURCE: Journal of Biological Chemistry (1996), 271(21), 12502-12510
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Screening of a human breast epithelial cell cDNA library with the tyrosine-phosphorylated C terminus of the epidermal growth factor receptor identified a novel member of the GRB7 gene family, designated GRB14. In addition to a pleckstrin homol. domain-containing central region homologous to the Caenorhabditis elegans protein F10E9.6/mig10 and a C-terminal Src homol. 2 (SH2) domain, a conserved N-terminal motif, P(S/A)IPNPFPEL, can now be included as a hallmark of this family. GRB14 mRNA was expressed at high levels in the liver, kidney, pancreas, testis, ovary, heart, and skeletal muscle. Anti-Brb14 antibodies recognized a protein of approx. 58 kDa in a restricted range of human cell lines. Among those of breast cancer origin, GRB14 expression strongly correlated with estrogen receptor positivity, and differential expression was also observed among human prostate cancer cell lines. A GST-Grb14 SH2 domain fusion protein exhibited strong binding to activated platelet-derived growth factor (PDGF) receptors (PDGFRs) in vitro, but association between Grb14 and β-PDGFRs could not be detected in vivo. In serum-starved cells, Grb14 was phosphorylated on serine residues, which increased with PDGF, but not EGF, treatment. Grb14 is therefore a target for a PDGF-regulated serine kinase, an interaction that does not require PDGFR-Grb14 association

L7 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:727998 HCAPLUS
DOCUMENT NUMBER: 123:277512
TITLE: A human homolog of the Drosophila tumor suppressor gene l(2)gl maps to 17p11.2-12 and codes for a cytoskeletal protein that associates with nonmuscle myosin II heavy chain
AUTHOR(S): Strand, Dennis; Unger, Sylvia; Corvi, Raffaella; Hartenstein, Kirsten; Schenkel, Heide; Kalmes, Andreas; Merdes, Gunter; Neumann, Beate;

Krieg-Schneider, Frank
CORPORATE SOURCE: Dep. of Developmental Genetics, Deutsches Krebsforschungszentrum, Heidelberg, D-69120, Germany
SOURCE: Oncogene (1995), 11(2), 291-301
CODEN: ONCNES; ISSN: 0950-9232
PUBLISHER: Macmillan Scientific & Medical Division
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Inactivation of the tumor suppressor gene lethal(2) giant larvae (D-lgl) of Drosophila leads to malignant transformation of the presumptive adult optic centers in the larval brain and tumors of the imaginal disks. These malignancies result from the disorganization of a cytoskeletal network in which the D-LGL protein participates. Here we describe the isolation of a cDNA encoding the human homolog to the D-lgl gene designated as hugl. The hugl cDNA detects a locus spanning at least 25 kilobases (kb) in human chromosome band 17p11.2-12, which is centromeric to the p53 gene and recognizes a 4.5 kb RNA transcript. The hugl gene is expressed in brain, kidney and muscle but is barely seen in heart and placenta. Sequence anal. of the hugl cDNA demonstrates a long open reading frame, which has the potential to encode a protein of 1057 amino acids with a predicted mol. weight of 115 kdalton (kD). To further substantiate and identify the HUGL protein, we have prepared polyclonal rabbit antibodies against synthetic peptides corresponding to the amino and carboxyl termini of the conceptual translation product of the hugl gene. The affinity-purified anti-HUGL antibodies recognize a single protein with an apparent mol. weight of .apprx.115 kD. Similar to the Drosophila protein, HUGL is part of a cytoskeletal network and, is associated with nonmuscle myosin II heavy chain and a kinase that specifically phosphorylates HUGL at serine residues.

L7 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:318218 HCAPLUS
DOCUMENT NUMBER: 120:318218
TITLE: Induction and down-regulation of PLK, a human serine/threonine kinase expressed in proliferating cells and tumors
AUTHOR(S): Holtrich, Uwe; Wolf, Georg; Braeuninger, Andreas; Karn, Thomas; Boehme, Beatrix; Ruebsamen-Waigmann, Helga; Strebhardt, Klaus
CORPORATE SOURCE: Chemotherapeutisches Forschungsinst., Georg-Speyer-Haus, Frankfurt, 60596, Germany
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1994), 91(5), 1736-40
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have identified the nucleotide sequence of the cDNA encoding the human counterpart of the mouse gene Plk (polo-like kinase). The sequence of the human gene, PLK, predicts a serine/threonine kinase of 603 aa. Expression of PLK mRNA appeared to be strongly correlated with the mitotic activity of cells. Resting peripheral lymphocytes did not express the gene at all. When primary T cells were activated by phytohemagglutinin, a high level of PLK transcripts resulted within 2-3 days. In some cases, addition of interleukin 2 to these cells increased the expression of PLK mRNA further. In contrast, primary cultures of human peripheral macrophages, which were not dividing under the culture conditions applied, showed very little or no PLK mRNA. Stimulation of these cells by bacterial lipopolysaccharide, and inducer of several cytokines in macrophages, totally abrogated the expression of PLK mRNA. In line with a function of PLK mRNA expression in mitotically active cells is the authors' finding that six immortalized cell lines examined expressed the gene. In A-431 epidermoid carcinoma cells this expression was down-regulated by serum starvation and enhanced after serum was added again. Tumors of various origin (lung, colon, stomach, smooth muscle, and

esophagus as well as non-Hodgkin lymphomas) expressed high levels of PLK transcripts in about 80% of the samples studied, whereas PLK mRNA was absent in surrounding tissue, except for colon. The only normal tissues where PLK mRNA expression was observed were colon and placenta, both known to be mitotically active. No PLK transcripts were found in normal adult lung, brain, heart, liver, kidney, skeletal muscle, and pancreas. In Northern blot expts. with RNA from lymphocytes which were treated with phytohemagglutinin and cycloheximide, PLK transcripts were not detectable, suggesting that PLK is not an early growth-response gene.

L7 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:264453 HCAPLUS
DOCUMENT NUMBER: 120:264453
TITLE: Prokaryotic expression cloning of a novel human tyrosine kinase
AUTHOR(S): Beeler, John F.; LaRochelle, William J.; Chedid, Marcio; Tronick, Steven R.; Aaronson, Stuart A.
CORPORATE SOURCE: Lab. Cell. Mol. Biol., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Molecular and Cellular Biology (1994), 14(2), 982-8
CODEN: MCEBD4; ISSN: 0270-7306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Screening of a human embryonic lung fibroblast cDNA expression library with antiphosphotyrosine antibodies led to isolation of a novel protein kinase. A clone, designated A6, contained a 3-kb cDNA insert with a predicted open reading frame of 350 amino acids. DNA sequence anal. failed to reveal any detectable similarity with previously known genes, and the predicted A6 protein lacked any of the motifs commonly conserved in the catalytic domains of protein kinases. However, the bacterially expressed β-galactosidase-A6 fusion protein demonstrated both tyrosine and serine phosphorylation in an in vitro kinase assay and phosphorylated exogenous substrates including myelin basic protein specifically on tyrosine residues. The enzyme also displayed biochem. properties analogous to those of other protein tyrosine kinases. The A6 gene was found to be expressed widely at the transcript level in normal tissues and was evolutionarily conserved. Thus, A6 represents a novel tyrosine kinase which is highly divergent from previously described members of this important class of regulatory mols.

L7 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:695669 HCAPLUS
DOCUMENT NUMBER: 121:295669
TITLE: Identification and characterization of DBK, a novel putative serine/threonine protein kinase from human endothelial cells
AUTHOR(S): Chu, Wei; Presky, David H.; Danho, Waleed; Swerlick, Robert A.; Burns, Daniel K.
CORPORATE SOURCE: Dep. Inflammation/Autoimmune Diseases, Hoffman-La Roche Inc., Nutely, NJ, USA
SOURCE: European Journal of Biochemistry (1994), 225(2), 695-72
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Protein kinases are involved in signal transduction pathways and play important roles in the regulation of cell functions. CDNA clones encoding a novel serine/threonine protein kinase sequence, designated as DBIC, were isolated from cDNA libraries made from human endothelial cells. The compiled nucleotide sequence 1636 base pairs long, consisting of an open reading frame encoding a 479-amino-acid protein with a calculated mol. mass of

53 kDa. The deduced amino acid sequence contains a protein kinase catalytic domain of 263 residues which includes all the characteristic features of a serine/threonine protein kinase. The invariant amino acid residues scattered throughout the catalytic domain of almost all known protein kinases are also found in DBK. Sequence comparison of DBK catalytic domain shows approx. 51% sequence identities to that of human protein kinase C family members. DBK shares the highest sequence identity, 53%, to that of Drosophila PKC. Northern blot anal. of various human tissues and cultured cell lines with a DBK gene-specific cDNA probe demonstrated a single band of 2.0 kb that is expressed in all tissues and cell lines examined Although the expression of DBK kinase was detected in all human tissues analyzed, the levels of expression varied significantly, with the highest expression detected in lung and heart, and the lowest expression found in brain and liver. Anti-DBK peptide-specific rabbit antisera were prepared, and were capable of immunopptg. DBK protein from COS cells transfected with DBK cDNA. The DBK gene is a single-copy gene, and is highly conserved across species from human to yeast. Using somatic cell hybrids, the DBK gene has been localized to human chromosome 14. The ubiquitous expression and high degree of conservation of DBK across species suggest that DBK may play an important role in cell functions.

L7 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:48831 HCAPLUS
DOCUMENT NUMBER: 120:48831
TITLE: The human cot proto-oncogene encodes two protein serine/threonine kinases with different transforming activities by alternative initiation of translation
AUTHOR(S): Aoki, Masahiro; Hamada, Fumihiko; Sugimoto, Toshiro; Sumida, Shuji; Akiyama, Tetsu; Toyoshima, Kumao
CORPORATE SOURCE: Res. Inst. Microb. Dis., Osaka Univ., Suita, 565, Japan
SOURCE: Journal of Biological Chemistry (1993), 268(30), 22723-32
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cot gene is an oncogene encoding serine/threonine kinases isolated by DNA transfection assay. In this study, cDNA for the human cot protooncogene (proto-cot gene) was isolated and the structure and function of its gene products were examined The proto-cot gene has an open reading frame encoding 467 amino acids of which the first 397 amino acids are identical to those in the corresponding part of the cot gene. The protein products of the proto-cot gene were identified as 58- and 52-kDa proteins with intrinsic protein serine/threonine kinase activity. These two protein species were suggested to be generated by alternative initiation from two AUGs. The 58- and 52-kDa proteins are both localized predominantly in the cytosol, but the 58-kDa protein has a shorter half-life than the 52-kDa protein, suggesting the importance of the amino-terminal domain in regulating the stability of the proto-Cot protein. More interestingly, the 58-kDa protein showed stronger transforming activity than the 52-kDa protein, although this activity was much weaker than that of the Cot oncoprotein. Thus, the amino-terminal domain of the Cot protein may be necessary for cellular transformation, whereas the carboxyl-terminal domain may neg. regulate the transforming activity.

L7 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:446503 HCAPLUS
DOCUMENT NUMBER: 119:46503
TITLE: Expression cDNA cloning of a serine kinase transforming gene
AUTHOR(S): Chan, Andrew M. L.; Chedid, Marcio; McGovern, Elizabeth S.; Popescu, Nickolas C.; Miki, Toru;

Aaronson, Stuart A.
CORPORATE SOURCE: Lab. Cell. Mol. Biol., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Oncogene (1993), 8(5), 1329-33
CODEN: ONCNES; ISSN: 0950-9232
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Ectopic expression of cDNAs derived from a Ewing sarcoma cell line in NIH3T3 cells, was used to isolate a transforming gene (est). Sequence anal. revealed homol. to the cot oncogene, which encodes a novel serine kinase. Whereas the cot product was truncated at its carboxy-terminal end as a result of gene rearrangement during transfection, est encodes the normal cot product. Thus, this gene can be activated as an oncogene by overexpression as well as by gene rearrangement. NIH3T3 cells transfected with est formed progressively growing colonies in soft agar and were tumorigenic in nude mice. The 3.2-kb est transcript was expressed at low levels in both human fibroblasts and epithelial cells. Addition of the tumor promoter, okadaic acid (OA), or cytokine, interleukin 1 (IL-1), but not serum or platelet-derived growth factor (PDGF), induced increased expression of the est transcript. Fluorescence in situ hybridization was used to localize the est gene to the short arm of human chromosome 10 at band p11.2.

L7 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:96946 HCAPLUS
DOCUMENT NUMBER: 120:96946
TITLE: Cloning of a TGFβ type I receptor that forms a heteromeric complex with the TGFβ type II receptor
AUTHOR(S): Franzen, Petra; ten Dijke, Peter; Ichijo, Hidenori; Yamashita, Hidetoshi; Schulz, Peter; Heldin, Carl Henrik; Miyazono, Kohei
CORPORATE SOURCE: Biomed. Cent., Ludwig Inst. Cancer Res., Uppsala, S-751 24, Swed.
SOURCE: Cell (Cambridge, MA, United States) (1993), 75(4), 681-92
CODEN: CELLB5; ISSN: 0092-8674
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A cDNA clone encoding a 53 kDa serine/threonine kinase receptor with an overall structure similar to that of the type II receptor for transforming growth factor β (TGFβ) was obtained. 125I-TGFβ1 bound to porcine endothelial cells transfected with the cDNA and formed a cross-linked complex of 70 kDa, characteristic of a TGFβ type I receptor. Immunopptn. of the cross-linked complexes by antibodies against the cloned receptor revealed the 70 kDa complex as well as a 94 kDa TGFβ type II receptor complex. The immunopptd. novel serine/threonine kinase receptor had biochem. properties of the TGFβ type I receptor and was observed in different cell types. Transfection of the cloned cDNA into TGFβ type I receptor-deficient cells restored TGFβ-induced plasminogen activator inhibitor I production These results suggest that signal transduction by TGFβ involves the formation of a heteromeric complex of two different serine/threonine kinase receptors.

L7 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:674535 HCAPLUS
DOCUMENT NUMBER: 115:274535
TITLE: cdc2 Phosphorylation is required for its interaction with cyclin
AUTHOR(S): Ducommun, Bernard; Brambilla, Paolo; Felix, Marie Anne; Franza, B. Robert, Jr.; Karsenti, Eric; Draetta, Giulio

CORPORATE SOURCE: Diff. Program., Eur. Mol. Biol. Lab., Heidelberg, D-6900, Germany
SOURCE: EMBO Journal (1991), 10(11), 3311-19
CODEN: EMJODG; ISSN: 0261-4189
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Activation of the cdc2 protein kinase at different stages of the cell cycle is regulated by post-translational modifications and interactions with cyclins. It is shown that in vitro translated human cdc2 binds very poorly to A and B cyclins, unless it has been preincubated with a Xenopus egg extract This results in the phosphorylation of cdc2 which allows binding to cyclins. The replacement of Thr161, a residue conserved and phosphorylated in other protein kinase, with valine inhibits cdc2 association with A and B cyclins. In addition, mutations in the amino-terminus of cdc2 and within the conserved PSTAIR region strongly inhibit binding. The Thr161Val mutation causes a lethal phenotype in the fission yeast Schizosaccharomyces pombe, while replacement of Thr161 with glutamic acid, potentially mimicking phosphorylation, causes uncoordination of mitosis and multiple cytokinesis. These results suggest that a threonine phosphorylation/dephosphorylation cycle is involved in regulating cdc2 function.

=> d his

(FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005
L1 1303457 S KINASE?
L2 431794 S SERINE OR THREONINE
L3 107695 S L1 AND L2
L4 44729 S HUMAN AND L3
L5 7008658 S CLON? OR EXPRESS? OR RECOMBINANT
L6 23 S HUMAN (A)L1(A)L2
L7 23 DUP REM L6 (0 DUPLICATES REMOVED)

=> s l4 and l5
L8 26206 L4 AND L5

=> s "chromosome 13"
L9 13226 "CHROMOSOME 13"

=> s l8 and l9
L10 23 L8 AND L9

=> dup rem l10
PROCESSING COMPLETED FOR L10
L11 15 DUP REM L10 (8 DUPLICATES REMOVED)

=> d 1-15 ibib ab

L11 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2005:112755 HCAPLUS
DOCUMENT NUMBER: 142:153476
TITLE: Gene **expression** profiles and biomarkers for the detection of depression-related and other disease-related gene transcripts in blood
INVENTOR(S): Liew, Choong-chin
PATENT ASSIGNEE(S): Chondrogene Limited, Can.
SOURCE: U.S. Pat. Appl. Publ., 154 pp., Cont.-in-part of U.S.

Ser. No. 802,875.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 41
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004265868	A1	20041230	US 2004-812702	20040330
US 2004014059	A1	20040122	US 2002-268730	20021009
US 2004248169	A1	20041209	US 2004-812737	20040330
US 2004265868	A1	20041230	US 2004-812702	20040330
WO 2004112589	A2	20041229	WO 2004-US20836	20040621

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 1999-115125P	P	19990106
US 2000-477148	B1	20000104
US 2002-268730	A2	20021009
US 2003-601518	A2	20030620
US 2004-802875	A2	20040312
US 2004-812702	A	20040330
US 2001-271955P	P	20010228
US 2001-275017P	P	20010312
US 2001-305340P	P	20010713
US 2002-85783	A2	20020228
US 2004-809675	A	20040325

AB The present invention is directed to detection and measurement of gene transcripts and their equivalent nucleic acid products in blood. Specifically provided is anal. performed on a drop of blood for detecting, diagnosing, and monitoring diseases, and in particular mental depression, using gene-specific and/or tissue-specific primers. Affymetrix **Human** Genome U133 and ChondroChip microarrays were used to detect differentially **expressed** gene transcripts in hypertension, obesity, allergy, systemic steroids, coronary artery disease, diabetes type 2, hyperlipidemia, lung disease, bladder cancer, rheumatoid arthritis, osteoarthritis, liver cancer, schizophrenia, Chagas disease, asthma, and manic depression syndrome. The present invention describes methods by which delineation of the sequence and/or quantitation of the **expression** levels of disease-specific genes allows for an immediate and accurate diagnostic/prognostic test for disease or to assess the effect of a particular treatment regimen. [This abstract record is one of 3 records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.].

L11 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:837241 HCAPLUS
DOCUMENT NUMBER: 139:345904
TITLE: Pre-and post therapy gene **expression** profiling to identify drug targets for treatment of acute lymphoblastic leukemia
INVENTOR(S): Evans, William Edward; Relling, Mary V.

PATENT ASSIGNEE(S): St. Jude Children's Research Hospital, Inc., USA
SOURCE: PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003087315	A2	20031023	WO 2003-US10603	20030407
WO 2003087315	A3	20031231		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003224422	A1	20031204	US 2003-407790		20030404
PRIORITY APPLN. INFO.:			US 2002-370835P	P	20020408
			US 2003-449893P	P	20030225

AB This invention presents pre-and post therapy gene **expression** profiling to identify drug targets for treatment of childhood acute lymphoblastic leukemia (ALL). A general method for identifying biol. targets for improving currently available therapies is provided. Target genes and their **expression** products are identified based on their response to methotrexate or mercaptopurine therapy as determined through pre- and post-therapy **expression** profiles. In another aspect, differences in **expression** profiles between responsive and nonresponsive patients are taken into account to identify potential new targets for the development of novel medications or treatments. The invention also provides methods for comparing therapies to predict which will have the best therapeutic efficacy and/or the least potential deleterious. The methods taught are specifically applied to identify targets for improving treatment of acute lymphoblastic leukemia.

L11 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:793831 HCAPLUS
DOCUMENT NUMBER: 137:305800
TITLE: Protein, gene and cDNA sequences of a novel **human** protein **kinase** related to **serine/threonine kinase** and their uses in drug screening
INVENTOR(S): Webster, Marion; Yan, Chunhua; Di Francesco, Valentina; Beasley, Ellen M.
PATENT ASSIGNEE(S): PE Corporation (NY), USA
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002081727	A2	20021017	WO 2002-US10156	20020402
WO 2002081727	A3	20030710		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 6500656	B1	20021231	US 2001-873404	20010605
CA 2443685	AA	20021017	CA 2002-2443685	20020402
EP 1385865	A2	20040204	EP 2002-763884	20020402

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:	US 2001-824583	A 20010403
	US 2001-873404	A 20010605
	WO 2002-US10156	W 20020402

AB The invention provides protein, cDNA and genomic sequences for a novel **human** protein **kinase** related to **serine/threonine kinase**. Specifically, a virtual northern blot shows **serine/threonine kinase** gene **expression** in lung carcinoma and placenta. Thirty three single nucleotide polymorphism has been found on **serine/threonine kinase** gene that has been mapped to **chromosome 13**. The invention also relates to screening modulator of **serine/threonine kinase** and use them in therapy. The invention further relates to methods, vector and hosts for **expression** of **serine/threonine kinase**.

L11 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2002:37537 HCAPLUS
DOCUMENT NUMBER:	136:292162
TITLE:	RGC-32 increases p34CDC2 **kinase** activity and entry of aortic smooth muscle cells into S-phase
AUTHOR(S):	Badea, Tudor; Niculescu, Florin; Soane, Lucian; Fosbrink, Matthew; Sorana, Hila; Rus, Violeta; Shin, Moon L.; Rus, Horea
CORPORATE SOURCE:	Department of Pathology, University of Maryland School of Medicine, Baltimore, MD, 21201, USA
SOURCE:	Journal of Biological Chemistry (2002), 277(1), 502-508 CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER:	American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Proliferation of aortic smooth muscle cells contributes to atherogenesis and neointima formation. Sublytic activation of complement, particularly C5b-9, induces cell cycle progression in aortic smooth muscle cells. RGC-32 is a novel protein that may promote cell cycle progression in response to complement activation. We **cloned human** RGC-32 cDNA from a **human** fetal brain cDNA library. The **human** RGC-32 cDNA encodes a 117-amino acid protein with 92% similarity to the rat and mouse protein. **Human** RGC-32 maps to **chromosome 13** and is **expressed** in most tissues. Sublytic complement activation enhanced RGC-32 mRNA **expression** in **human** aortic smooth muscle cells and induced nuclear translocation of the protein. RGC-32 was phys. associated with cyclin-dependent **kinase** p34CDC2 and increased the **kinase** activity in vivo and in vitro. In addition, RGC-32 was phosphorylated by p34CDC2-cyclin B1 in vitro. Mutation of RGC-32 protein at Thr-91 prevented the p34CDC2-mediated phosphorylation and resulted in

loss of p34CDC2 **kinase** enhancing activity. Overexpression of RGC-32 induced quiescent aortic smooth muscle cells to enter S-phase. These data indicate that cell cycle activation by C5b-9 may involve p34CDC2 activity through RGC-32. RGC-32 appears to be a cell cycle regulatory factor that mediates cell proliferation, both as an activator and substrate of p34CDC2.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 15 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:356611 BIOSIS

DOCUMENT NUMBER: PREV200300356611

TITLE: Gene **Expression** Profiles of Distinct Cytogenetic CLL Subtypes.

AUTHOR(S): Kohlmann, Alexander [Reprint Author]; Schoch, Claudia [Reprint Author]; Dugas, Martin [Reprint Author]; Hiddemann, Wolfgang [Reprint Author]; Haferlach, Torsten [Reprint Author]

CORPORATE SOURCE: Department of Internal Medicine III, Laboratory for Leukemia Diagnostics, Munich, Germany

SOURCE: Blood, (November 16 2002) Vol. 100, No. 11, pp. Abstract No. 629. print.
Meeting Info.: 44th Annual Meeting of the American Society of Hematology. Philadelphia, PA, USA. December 06-10, 2002. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)

LANGUAGE: English

ENTRY DATE: Entered STN: 6 Aug 2003
Last Updated on STN: 6 Aug 2003

AB Chronic lymphocytic leukemia (CLL) is a subset of mature B-cell neoplasms. About 80% of CLL cases demonstrate genetic abnormalities by fluorescence in situ hybridization (FISH). Based on this data, several genetic subgroups with distinct clinical features have been identified. We aimed at a molecular classification of distinct cytogenetically defined subtypes and analyzed 32 CLL cases by gene **expression** profiling using U133A microarrays (Affymetrix). In all cases interphase-FISH with probes for the following genes/loci was performed: RB (13q14), D13S25 (13q14), D13S319 (13q14), ATM (11q22-23), RDX (11q22-23), P53 (17p13), IGH (14q32), CCND1 (11q13) and the centromeric region of chromosome 12. Microarray data analysis was performed according to the method as introduced by Golub et al. (Science, 1999). According to interphase-FISH results our cohort of patients was grouped into: sole abnormality trisomy 12 (n=5), del(11q) (n=4), del(13q) (n=10), del(17p) (n=4) and no abnormality detected (n=9). In supervised pairwise and one-versus-all comparisons a minimal set of 18 differentially **expressed** genes was identified and functionally annotated using Gene Ontology terms and NetAffx database descriptions (Affymetrix). Classification accuracies were assessed by leave-one-out crossvalidation and the performance of these **expression** signatures was monitored by hierarchical clustering. Based on this subset of discriminative genes all samples could accurately be classified. This minimal set included 9 **human** gene nomenclature comittee approved genes and 9 hypothetical open reading frames. In detail, SFRS2IP, GIT2, ITGB5, ZNF197 and TK2 distinguished CLL with trisomy 12 from other CLL subtypes. Of these, SFRS2IP and GIT2 are located on chromosome 12 and showed a higher **expression** as compared to other subtypes suggesting a gene-dosage effect. PARG1 (PTPL1-associated RhoGAP 1), a regulator of Rho signaling, was able to discriminate between del(11q) and del(17p) CLLs. Additionally, loss of heterozygosity at the long arm of chromosome 11 (11q22-q24) has been associated with several types of cancers. Analyzing **expression** signatures of genes located

within this region of possible candidate tumor suppressor genes we identified 4 genes at 11q23 which were consistently lower **expressed** or absent in del(11q) CLLs compared to CLL without detectable aberrations: PPP2R1B, RDX, ZW10 and RBM7. PPP2R1B encodes a subunit, critical for phosphatase activity, of the **serine/threonine** protein phosphatase 2A holoenzyme (PP2A). PP2A is an important regulatory enzyme that downregulates the mitogen-activated protein **kinase** cascade, relays proliferation signals and was decribed to be linked to carcinogenesis. Disruption of this enzyme complex may promote leukemogenesis. RDX was lower **expressed** which is also in line with interphase-FISH data. Here, deletion of this gene indeed results in a reduced mRNA abundancy. In contrast, ATM, also deleted in this subgroup of patients was not differentially **expressed**. Chromosome 13q deletions could be identified based on **expression** differences of ADSL, a gene involved in purine biosynthesis and SLC22A5, involved in the active cellular uptake of carnitine. In conclusion, based on **expression** signatures of a minimal set of 18 genes we were able to classify five distinct cytogenetically defined CLL subtypes. Furthermore, top-ranked differentially **expressed** genes may give new insights into the pathogenesis of this most common leukemia.

L11 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:623972 HCAPLUS
DOCUMENT NUMBER: 135:207460
TITLE: cDNA and protein **kinase** of novel **human** and mouse protein **kinase** Lats2 and their uses as anti-tumor agents
INVENTOR(S): Taji, Shingo; Tamai, Katsuyuki; Yabuta, Norikazu; Nojima, Hiroshi
PATENT ASSIGNEE(S): Medical and Biological Laboratories Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001231565	A2	20010828	JP 2000-41818	20000218
PRIORITY APPLN. INFO.:			JP 2000-41818	20000218

AB This invention provides cDNA and protein sequence of novel **human** and mouse large tumor suppressor (lats) sequence homolog Lats2. Lats2 exhibits magnesium-dependent **serine/threonine** **kinase** activity with the optimum concentration of Mg2+ is 25mM and optimum pH at 6.0. The invention provides the tissue distribution of Lats2 and the Lats2 is mapped into **chromosome 13** (q11-q12). The Lats2 is presented in cell nucleus and phosphorylated during G0 to M phase of meiosis, indicating the role of Lats2 in cell division. The Lats2 is absent in several cancer cell, indicating the Lats2 functions as suppressor of tumor. The Lats2 provedes in this invention can be used in diagnosis and therapeutics and antitumor agents.

L11 ANSWER 7 OF 15 MEDLINE on STN
ACCESSION NUMBER: 2002319817 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12063396
TITLE: Molecular **cloning** and characterization of the **human** NIMA-related protein **kinase** 3 gene (NEK3).
AUTHOR: Kimura M; Okano Y
CORPORATE SOURCE: Department of Molecular Pathobiochemistry, Gifu University School of Medicine, Gifu, Japan.. yo@cc.gifu-u.ac.jp

SOURCE: Cytogenetics and cell genetics, (2001) 95 (3-4) 177-82.
Journal code: 0367735. ISSN: 0301-0171.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB072828
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 20020614
Last Updated on STN: 20020712
Entered Medline: 20020711

AB NEKs (NIMA-related **kinases**) are a group of protein **kinases** sharing high amino acid sequence identities with NIMA (never in mitosis gene a) which control mitosis in Aspergillus nidulans. We have **cloned** a cDNA for **human** NEK3, a novel **human** gene structurally related to NIMA, by RT-PCR. Its open reading frame encodes a protein of 489 amino acid residues with the calculated molecular mass of 56.0 kDa and a predicted pI of 6.58. Phylogenetic analysis suggests that mouse and **human** NEK3s constitute a subfamily within the NIMA family of protein **kinases**. The **expression** pattern of NEK3 was studied by RT-PCR and a high level of **expression** was detected in testis, ovary, and brain, with low-level **expression** being detected in most of the tissues studied. NEK3 mRNA was detected in all the proliferating cell lines studied, and the amount did not change during the cell cycle. The **human** NEK3 gene was assigned to **human chromosome 13** by somatic cell hybrids and 13q14.2 by radiation hybrid mapping.

L11 ANSWER 8 OF 15 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2000112812 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10644707
TITLE: Identification of a **human** brain-specific isoform of mammalian STE20-like **kinase** 3 that is regulated by cAMP-dependent protein **kinase**.
AUTHOR: Zhou T H; Ling K; Guo J; Zhou H; Wu Y L; Jing Q; Ma L; Pei G
CORPORATE SOURCE: Shanghai Institute of Cell Biology, Chinese Academy of Sciences, 320 Yue Yang Road, Shanghai 200031, People's Republic of China.
SOURCE: Journal of biological chemistry, (2000 Jan 28) 275 (4) 2513-9.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF083420
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000314
Last Updated on STN: 20020420
Entered Medline: 20000229

AB A novel isoform of mammalian STE20-like **kinase** 3 (MST3) with a different 5' coding region from MST3, termed MST3b, was identified by searching through **expressed** sequence tag data base and obtained by rapid amplification of cDNA 5'-ends. MST3b was assigned to the long arm of **human chromosome 13**, D13S159-D13S280, by use of the National Center for Biotechnology Information sequence-tagged sites data base. Reverse transcription-polymerase chain reaction and Northern blot analysis with a probe derived from 5' distinct sequence of MST3b revealed that the **expression** of MST3b mRNA is restricted to the brain, in contrast to ubiquitous distribution of MST3

transcript. Western analysis confirmed the brain-specific **expression** of MST3b protein. In situ hybridization of rat brain sections with a MST3b-specific probe indicated that MST3b is widely **expressed** in different brain regions, with especially high **expression** in hippocampus and cerebral cortex. When **expressed** in **human** embryonic kidney 293 (HEK293) cells, MST3b effectively phosphorylated myelin basic protein, as well as undergoing autophosphorylation. Interestingly, **expression** of MST3, but not MST3b, in HEK293 cells was able to activate the endogenous p42/44 mitogen-activated protein **kinase** (MAPK) up to 4-fold, whereas neither isoform activated p38 MAPK under the same conditions. Further experiments demonstrated that MST3b, but not MST3, was effectively phosphorylated by activation of cyclic AMP-dependent protein **kinase** (PKA) in both in vivo and in vitro assays. The mutation of Thr-18 into Ala in MST3b (T18A), a putative PKA phosphorylation site that is absent in MST3, abolished its phosphorylation by PKA. Consequently, **expression** of the T18A mutant in HEK293 cells led to partial activation of p42/44 MAPK, indicating that MST3b is under the regulation of PKA. Taken together, our data provide evidence that the two isoforms of STE20-like **kinase** 3 are differentially distributed and regulated.

L11 ANSWER 9 OF 15 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2000076393 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10607900
TITLE: Sak **kinase** gene structure and transcriptional regulation.
AUTHOR: Hudson J W; Chen L; Fode C; Binkert C; Dennis J W
CORPORATE SOURCE: Samuel Lunenfeld Research Institute, Mount Sinai Hospital, 600 University Avenue, Toronto, Canada.
SOURCE: Gene, (2000 Jan 4) 241 (1) 65-73.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF057165; GENBANK-AF059024; GENBANK-AF059617; GENBANK-AF080581; GENBANK-L29479
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000314
Last Updated on STN: 20020420
Entered Medline: 20000228

AB The Sak gene encodes a **serine/threonine kinase**, which is a member of the Polo family of mitotic regulators. Sak transcripts are present in S/G2/M phase cells, and in proliferating cell layers of the mouse embryo and adult tissues. In this report, we have characterized the murine Sak gene structure, the Sak chromosomal location, and identified the promoter. The murine Sak gene is located on the proximal arm of mouse **chromosome 13**, as determined by RFLP analysis. The murine gene comprises 15 coding exons spanning 16kb of genomic sequence, and encodes two alternately spliced transcripts. Sak-a, the predominant transcript, is encoded by 15 exons, while early termination of transcription and alternative splicing at exons 5 and 6 results in Sak-b. This truncated transcript encodes the complete **kinase** domain and a carboxyl end translated from 147bp of sequence contiguous with exon 5. **Human** Sak-a (Stk18) cDNA is reported to contain an insertion of sequence corresponding to the mouse Sak-b tail. Primer extension analysis of murine Sak revealed one major transcription start site at position -303bp relative to the start of translation. A genomic fragment of 3.5kb located 5' of the Sak transcriptional start drives **expression** of a luciferase-reporter gene in CHO and GC1-SPG cells in an orientation-dependent fashion. Using various Sak promoter/luciferase constructs, the core promoter region required for

expression was located within 400bp of the message Cap site, and sequence further 5' strongly suppressed transcription.

L11 ANSWER 10 OF 15 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2000:98687 LIFESCI
TITLE: Mapping of AKT3, encoding a member of the Akt/protein **kinase** B family, to **human** and rodent chromosomes by fluorescence in situ hybridization
AUTHOR: Murthy, S.S.; Tosolini, A.; Taguchi, T.; Testa, J.R.
CORPORATE SOURCE: Human Genetics Program, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia PA 19111, USA; E-mail: JR_Testa@fccc.edu
SOURCE: Cytogenetics and Cell Genetics [Cytogenet. Cell Genet.], (20000000) vol. 88, no. 1-2, pp. 38-40. ISSN: 0301-0171.
DOCUMENT TYPE: Journal
FILE SEGMENT: G
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Previously, a rodent cDNA encoding the third member of the Akt/PKB family of **serine/threonine kinases** was **cloned**. We have now **cloned** the **human** homolog of this cDNA, and we have used this **clone** to map the AKT3 gene to **human** chromosome 1q44 by fluorescence in situ hybridization (FISH). We have also mapped the rodent homologs of AKT3 to rat chromosome 13q24 arrow right q26 and mouse chromosome 1H4-6 by FISH.

L11 ANSWER 11 OF 15 MEDLINE on STN
ACCESSION NUMBER: 1999417680 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10486211
TITLE: Alternative splicing produces transcripts encoding four variants of mouse G-protein-coupled receptor **kinase** 6.
AUTHOR: Moepps B; Vatter P; Frodl R; Waechter F; Dixkens C; Hameister H; Gierschik P
CORPORATE SOURCE: Department of Pharmacology and Toxicology, University of Ulm, Ulm, 89081, Germany.
SOURCE: Genomics, (1999 Sep 1) 60 (2) 199-209. Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-Y15797; GENBANK-Y15798; GENBANK-Y15799; GENBANK-Y15800; GENBANK-Y17967
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991124
AB A family of protein **kinases**, termed G-protein-coupled receptor **kinases** (GRK1-6), is known to phosphorylate agonist-occupied G-protein-coupled receptors. We have identified mRNAs encoding four distinct mouse GRK6 isoforms (mGRK6), designated mGRK6-A through mGRK6-D. Mouse GRK6-B and mGRK6-C diverge from the known **human** GRK6 (577 residues) at residue 560 and are 13 residues longer and 16 residues shorter, respectively, than **human** GRK6, while mGRK6-A very likely represents the mouse equivalent of **human** GRK6. Mouse GRK6-D is identical to the other mGRK6 variants in the amino-terminal region, but comprises only 59 of the 263 amino acids of the putative catalytical domain. As mGRK6-D retains the region involved in interacting with activated receptors, but most likely lacks catalytic activity, this variant might represent a naturally occurring inhibitor of other GRKs. Analysis of the genomic organization of mGRK6 gene revealed that the four

mRNAs are generated by alternative RNA splicing from a single approximately 14. 5-kb gene, made up of at least 17 exons and located on mouse **chromosome 13**. Similar to **human** GRK6, mGRK6-A contains three cysteine residues within its carboxyl-terminal region known to serve as substrates for palmitoylation. Mouse GRK6-B lacks these palmitoylation sites, but carries a basic carboxyl-terminus containing consensus sequences for phosphorylation by protein **kinases** C and cAMP/cGMP-dependent protein **kinases**. Mouse GRK6-C displays none of these motifs. Thus, mGRK6-A, mGRK6-B, and mGRK6-C are predicted to differ in terms of their regulation by carboxyl-terminal posttranslational modification. Analysis of mRNA **expression** revealed that the four mGRK6 mRNAs are differentially **expressed** in mouse tissues, suggesting that the four mGRK6 isoforms are involved in regulating tissue- or cell type-specific functions in vivo.

L11 ANSWER 12 OF 15 MEDLINE on STN
ACCESSION NUMBER: 1999259175 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10328623
TITLE: Cytogenetic alignment of the bovine **chromosome 13** genome map by fluorescence in-situ hybridization of **human** chromosome 10 and 20 comparative markers.
AUTHOR: Gallagher D S Jr; Schlapfer J; Burzlaff J D; Womack J E; Stelly D M; Davis S K; Taylor J F
CORPORATE SOURCE: Department of Animal Science, Texas A&M University, College Station 77843, USA.
SOURCE: Chromosome research : an international journal on the molecular, supramolecular and evolutionary aspects of chromosome biology, (1999) 7 (2) 115-9. Journal code: 9313452. ISSN: 0967-3849.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199907
ENTRY DATE: Entered STN: 19990730
Last Updated on STN: 20020420
Entered Medline: 19990721

AB A bovine bacterial artificial chromosome (BAC) library was screened for the presence of six genes (IL2RA, VIM, THBD, PLC-II, CSNK2A1 and TOP1) previously assigned to **human** chromosomes 10 or 20 (HSA10 or HSA20). Four of the genes were found represented in the bovine BAC library by at least one **clone**. The identified BAC **clones** were used as probes in single-color fluorescence in-situ hybridization (FISH) to determine the chromosomal band location of each gene. As predicted by the **human**/bovine comparative map and comparative chromosome painting analysis, the four genes mapped to bovine **chromosome 13** (BTA13). Dual-color FISH was then used to integrate these four type I markers into the existing BTA13 genome map. These FISH results anchor the BTA13 genome map from bands 14-23, and confirm the presence of a conserved HSA10 homologous synteny group on BTA13 centromeric to a HSA20 homologous segment.

L11 ANSWER 13 OF 15 SCISEARCH on STN
ACCESSION NUMBER: 97:186973 SCISEARCH
THE GENUINE ARTICLE: WK611
TITLE: The C-terminal domain of Mad-like signal transducers is sufficient for biological activity in the Xenopus embryo and transcriptional activation
AUTHOR: Meersseman G; Verschueren K; Nelles L; Blumenstock C;

Kraft H; Wuytens G; Remacle J; Kozak C A; Tylzanowski P; Niehrs C; Huylebroeck D (Reprint)

CORPORATE SOURCE: UNIV LOUVAIN, DEPT CELL GROWTH DIFFERENTIAT & DEV VIB07, CAMPUS GASTHUISBERG, BLDG O & N, HERESTR 49, B-3000 LOUVAIN, BELGIUM (Reprint); FLANDERS INTERUNIV INST BIOTECHNOL, DEPT CELL GROWTH DIFFERENTIAT & DEV, VIB, B-3000 LOUVAIN, BELGIUM; UNIV LOUVAIN, MOL BIOL LAB, CELGEN, B-3000 LOUVAIN, BELGIUM; DEUTSCH KREBSFORSCHUNGSZENTRUM, GERMAN CANC RES CTR, DIV MOL EMBRYOL, D-69120 HEIDELBERG, GERMANY; NIAID, MOL MICROBIOL LAB, NIH, BETHESDA, MD 20892

COUNTRY OF AUTHOR: BELGIUM; GERMANY; USA

SOURCE: MECHANISMS OF DEVELOPMENT, (JAN 1997) Vol. 61, No. 1-2, pp. 127-140.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0925-4773.

DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 72

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We report the characterization of two vertebrate homologs of Drosophila mothers against dpp (Mad) isolated from the mouse and the Xenopus embryo, named MusMLP (mad-like protein) and XenMLP, respectively, together with a summary of their **expression** patterns in the embryo. Overexpression of XenMLP causes ventralization of Xenopus embryos and we demonstrate that the C-terminal domain is necessary and sufficient to confer this biological effect. This domain also has the potential for transcriptional activation, as shown in one-hybrid assays in mammalian cells. We further demonstrate that MLPs are multidomain proteins by showing a cis-negative effect of the N-terminal domain on the transactivation by the C-terminal domain and that the proline-rich, middle domain maximizes the activity of the C-terminal domain. We also mapped the MusMLP gene to a region on mouse **chromosome 13** that corresponds to a region on **human** chromosome 59 that contains cancer-related genes. (C) 1997 Elsevier Science Ireland Ltd.

L11 ANSWER 14 OF 15 MEDLINE on STN

ACCESSION NUMBER: 97169140 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9016947

TITLE: Identification and chromosomal localization of a processed pseudogene of **human** GRK6.

AUTHOR: Gagnon A W; Benovic J L
CORPORATE SOURCE: Department of Pharmacology, Kimmel Cancer Institute, Thomas Jefferson University, Philadelphia, PA 19107, USA.

CONTRACT NUMBER: 5-T32-CA09662-02 (NCI)
GM44944 (NIGMS)
SOURCE: Gene, (1997 Jan 3) 184 (1) 13-9.
Journal code: 7706761. ISSN: 0378-1119.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U48958
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970306
Last Updated on STN: 20000303
Entered Medline: 19970227

AB G-protein-coupled receptor **kinases** (GRKs) phosphorylate agonist-occupied G-protein-coupled receptors, resulting in desensitization of receptor signaling. To date, 6 mammalian GRKs have been identified by molecular **cloning**. Several lines of evidence indicate that a

homologue of GRK6, the most recently described GRK, is present in the **human** genome. Northern analysis identifies two transcripts which hybridize to GRK6, and genomic Southern analysis indicates that GRK6 is localized to chromosome 5, with a second GRK6-like locus on **chromosome 13**. To identify the GRK6 homologue on chromsome 13, several sets of closely-spaced primers were designed based on the GRK6 cDNA sequence and then used to amplify **human** genomic DNA by PCR. Two products were identified, the larger of which is a fragment of the GRK6 gene which contains introns, while the smaller fragment is 94% homologous to GRK6 and contains no introns. In order to further characterize this GRK6 homologue, primers from the 5' and 3' coding regions of GRK6 were used to amplify a product of 1458 base pairs from **human** genomic DNA. This 1458 base pair PCR fragment displays 94% homology to GRK6 and contains multiple nucleotide insertions and deletions compared to GRK6, including a C to T mutation at base pair 202 which creates a predicted in-frame stop codon. In an effort to determine whether this gene is transcriptionally active, primers designed to preferentially amplify either GRK6 or the homologue were used in reverse transcription PCR. In contrast to the GRK6-specific primers, primers which selectively amplify the GRK6 homologue fail to produce a PCR product in any RNA tested, indicating that this gene is most likely transcriptionally inactive. PCR amplification of rodent/**human** hybrid cell lines using these same primers confirms the previously established chromosome 5 localization of GRK6, and localizes this homologue to **chromosome 13**. Northern analysis indicates that the two GRK6-hybridizing species seen in RNA differ by approximately 500 base pairs in the 3' untranslated region, indicating that both transcripts likely arise from differential processing of a single gene. Taken together, these data indicate that the GRK6-hybridizing species on **chromosome 13** is a transcriptionally inactive processed pseudogene of GRK6, while the two GRK6 transcripts differ in the 3' untranslated region.

L11 ANSWER 15 OF 15 MEDLINE on STN
ACCESSION NUMBER: 96422191 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8824808
TITLE: Chromosomal assignment of the gene encoding the **human** 58-kDa inhibitor (PRKRI) of the interferon-induced dsRNA-activated protein **kinase** to chromosome 13q32.
AUTHOR: Korth M J; Edelhoff S; Disteche C M; Katze M G
CORPORATE SOURCE: Department of Microbiology, University of Washington, Seattle 98195, USA.
CONTRACT NUMBER: AI 22646 (NIAID)
RR 00166 (NCRR)
SOURCE: Genomics, (1996 Jan 15) 31 (2) 238-9.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970313
Last Updated on STN: 19980206
Entered Medline: 19970304

AB The 58-kDa inhibitor (p58) of the interferon-induced dsRNA-activated protein **kinase** (PKR) is a cellular protein recruited by the influenza virus to down-regulate the activity of PKR during virus infection. The inhibitor also appears to play a role in the regulation of cellular gene **expression** in the absence of viral infection and has oncogenic properties when overexpressed. Using fluorescence in situ hybridization, we have mapped the p58 gene (PRKRI) to **human** **chromosome 13** band q32. Aberrations in the structure or

number of **chromosome 13** have been identified in a variety of **human** cancers, particularly in acute leukemia.

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=> s lung or carcinoma or placenta
L12    3112750 LUNG OR CARCINOMA OR PLACENTA

=> d his

     (FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005
L1      1303457 S KINASE?
L2       431794 S SERINE OR THREONINE
L3       107695 S L1 AND L2
L4        44729 S HUMAN AND L3
L5      7008658 S CLON? OR EXPRESS? OR RECOMBINANT
L6           23 S HUMAN (A)L1(A)L2
L7           23 DUP REM L6 (0 DUPLICATES REMOVED)
L8        26206 S L4 AND L5
L9        13226 S "CHROMOSOME 13"
L10          23 S L8 AND L9
L11          15 DUP REM L10 (8 DUPLICATES REMOVED)
L12     3112750 S LUNG OR CARCINOMA OR PLACENTA

=> s l8 and l12
L13       3424 L8 AND L12

=> s l6 and l13
L14         12 L6 AND L13

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15          12 DUP REM L14 (0 DUPLICATES REMOVED)

=> d 1-12 ibib ab

L15  ANSWER 1 OF 12  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:141228  HCAPLUS
DOCUMENT NUMBER:          142:234465
TITLE:                    Human serine/threonine
                          kinase Pim-3 showing aberrant
                          expression in hepatocellular carcinoma
                          development and its utility as hepatoma marker
INVENTOR(S):              Mukaida, Naofumi; Hujii, Chifumi; Hirose, Kunitaka
PATENT ASSIGNEE(S):       Kureha Chemical Industry Company, Limited, Japan
SOURCE:                   PCT Int. Appl., 61 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2005014809         A1    20050217    WO 2004-JP11669         20040806
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: JP 2003-291060 A 20030811

AB This invention provides a polypeptide specific to liver cancer, a polynucleotide encoding the polypeptide, and **recombinant expression**. RNA mol. inhibiting the **expression** of the polypeptide and therapeutic use, are claimed. Antibodies, particularly monoclonal antibodies specific to the polypeptide and use as diagnostic agent for liver cancer are also claimed. PCR primers for detecting the gene are provided. Most cases of **human** hepatocellular **carcinoma** develop after persistent chronic infection with **human** hepatitis B virus or hepatitis C virus, and host responses are presumed to have major roles in this process. To recapitulate this process, the authors have developed the mouse model of hepatocellular **carcinoma** using hepatitis B virus surface antigen transgenic mice. To identify the genes associated with hepatocarcinogenesis in this model, they compared the gene **expression** patterns between pre-malignant lesions surrounded by hepatocellular **carcinoma** tissues and control liver tissues by using a fluorescent differential display anal. Among the genes that were **expressed** differentially in the pre-malignant lesions, they focused on Pim-3, a member of a proto-oncogene Pim family, because its contribution to hepatocarcinogenesis remains unknown. Moreover, the unavailability of the nucleotide sequence of full-length **human** Pim-3 cDNA prompted us to **clone** it from the cDNA library constructed from a **human** hepatoma cell line, HepG2. The obtained 2,392 bp **human** Pim-3 cDNA encodes a predicted open reading frame consisting of 326 amino acids. Pim-3 mRNA was selectively **expressed** in **human** hepatoma cell lines, but not in normal liver tissues. Moreover, Pim-3 protein was detected in **human** hepatocellular **carcinoma** tissues and cell lines but not in normal hepatocytes. Furthermore, cell proliferation was attenuated and apoptosis was enhanced in **human** hepatoma cell lines by the ablation of Pim-3 gene with RNA interference. These observations suggest that aberrantly **expressed** Pim-3 can cause autonomous cell proliferation or prevent apoptosis in hepatoma cell lines.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:371153 HCAPLUS

DOCUMENT NUMBER: 140:371494

TITLE: Binary prediction tree modeling with many predictors and its uses in clinical and genomic applications

INVENTOR(S): Nevins, Joseph R.; West, Mike; Huang, Andrew T.

PATENT ASSIGNEE(S): Duke University, USA

SOURCE: PCT Int. Appl., 886 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004038376	A2	20040506	WO 2003-US33946	20031024
WO 2004038376	A3	20040826		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,

OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
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WO 2004038376 A2 20040506 WO 2003-XA33946 20031024
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
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GW, ML, MR, NE, SN, TD, TG

WO 2004038376 A2 20040506 WO 2003-XB33946 20031024
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2002-420729P	P	20021024
US 2002-421062P	P	20021025
US 2002-421102P	P	20021025
US 2002-424701P	P	20021108
US 2002-424715P	P	20021108
US 2002-424718P	P	20021108
US 2002-425256P	P	20021112
US 2003-448461P	P	20030221
US 2003-448462P	P	20030221
US 2003-457877P	P	20030327
US 2003-458373P	P	20030331
WO 2003-US33946	A	20031024

AB The statistical anal. described and claimed is a predictive statistical tree model that overcomes several problems observed in prior statistical models and regression analyses, while ensuring greater accuracy and predictive capabilities. Although the claimed use of the predictive statistical tree model described herein is directed to the prediction of a disease in individuals, the claimed model can be used for a variety of applications including the prediction of disease states, susceptibility of disease states or any other biol. state of interest, as well as other applicable non-biol. states of interest. This model first screens genes to reduce noise, applies kmeans correlation-based clustering targeting a large number of clusters, and then uses singular value decompns. (SVD) to extract the single dominant factor (principal component) from each cluster. This generates a statistically significant number of cluster-derived singular factors, that are referred to as metagenes, that characterize multiple patterns of **expression** of the genes across samples. The strategy aims to extract multiple such patterns while reducing dimension and smoothing out gene-specific noise through the aggregation within clusters. Formal predictive anal. then uses these metagenes in a Bayesian classification tree anal. This generates multiple recursive partitions of the sample into subgroups (the 'leaves' of the classification tree), and

assocs. Bayesian predictive probabilities of outcomes with each subgroup. Overall predictions for an individual sample are then generated by averaging predictions, with appropriate wts., across many such tree models. The model includes the use of iterative out-of-sample, cross-validation predictions leaving each sample out of the data set one at a time, refitting the model from the remaining samples and using it to predict the hold-out case. This rigorously tests the predictive value of a model and mirrors the real-world prognostic context where prediction of new cases as they arise is the major goal.

L15 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:356640 HCAPLUS
DOCUMENT NUMBER: 138:380471
TITLE: Genes that are differentially **expressed** during erythropoiesis and their diagnostic and therapeutic uses
INVENTOR(S): Brissette, William H.; Neote, Kuldeep S.; Zagouras, Panayiotis; Zenke, Martin; Lemke, Britt; Hacker, Christine
PATENT ASSIGNEE(S): Pfizer Products Inc., USA; Max-Delbrueck-Centrum Fuer Molekulare Medizin
SOURCE: PCT Int. Appl., 285 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003038130	A2	20030508	WO 2002-US34888	20021031
WO 2003038130	A3	20040212		
WO 2003038130	C1	20040422		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2003038130	A2	20030508	WO 2002-XA34888	20021031
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004014064	A1	20040122	US 2002-285366	20021031
EP 1446507	A2	20040818	EP 2002-798424	20021031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				

PRIORITY APPLN. INFO.:		
US 2001-335048P	P	20011031
US 2001-335183P	P	20011102
WO 2002-US34888	A	20021031

AB The present invention provides mol. targets that regulate erythropoiesis.

Groups of genes or their encoded gene products comprise panels of the invention and may be used in therapeutic intervention, therapeutic agent screening, and in diagnostic methods for diseases and/or disorders of erythropoiesis. The panels were discovered using gene **expression** profiling of erythroid progenitors with Affymetrix HU6800 and HG-U95Av2 chips. Cells from an in vitro growth and differentiation system of SCF-Epo dependent **human** erythroid progenitors, E-cadherin+/CD36+ progenitors, cord blood, or CD34+ peripheral blood stem cells were analyzed. The HU6800 chip contains probes from 13,000 genes with a potential role in cell growth, proliferation, and differentiation and the HG-U95Av2 chip contains 12,000 full-length, functionally-characterized genes. This abstract record is one of two records for this document necessitated by the large number of index entries required to fully index the
document and publication system constraints.

L15 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:575214 HCAPLUS
DOCUMENT NUMBER: 137:136129
TITLE: **Human** protein **kinase** and the cDNA and genomic DNA encoding the protein **kinase**
INVENTOR(S): Beasley, Ellen M.; Ye, Jane; Yan, Chunhua; Ketchum, Karen A.; Di Francesco, Valentina
PATENT ASSIGNEE(S): PE Corporation (NY), USA
SOURCE: PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002059288	A2	20020801	WO 2002-US930	20020115
WO 2002059288	A3	20030410		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003022337	A1	20030130	US 2001-819607	20010329
US 6686176	B2	20040203		
CA 2435508	AA	20020801	CA 2002-2435508	20020115
EP 1356027	A2	20031029	EP 2002-705765	20020115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004067568	A1	20040408	US 2003-633631	20030805
PRIORITY APPLN. INFO.:			US 2001-263162P P	20010123
			US 2001-819607 A	20010329
			WO 2002-US930 W	20020115

AB The present invention provides the amino acid sequence a **human** protein, and encoding gene and cDNA sequences, that shows a particularly high degree of similarity to the the **serine/threonine** protein **kinase** EVC gene which is associated with Ellis-van Creveld syndrome and Weyers acrodental dysostosis. Exptl. data indicates **expression** in **humans** in prostate, **lung**, and whole brain. The present invention specifically provides isolated peptide and nucleic acid mols., methods of identifying orthologs and paralogs of

the **kinase** peptides, and methods of identifying modulators of the **kinase** peptides.

L15 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:522007 HCAPLUS
DOCUMENT NUMBER: 137:74476
TITLE: **Human serine-threonine** protein **kinase** and cDNAs and drug screening targeted to its regulation and other therapeutic application for related diseases
INVENTOR(S): Koehler, Rainer H.
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053749	A2	20020711	WO 2001-EP15320	20011227
WO 2002053749	A3	20021205		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
US 2001-259215P	P	20010103
US 2001-306468P	P	20010720
US 2001-308098P	P	20010730

AB Two **human serine-threonine** protein **kinase** and cDNA, related proteins retrieved from sequence homolog anal., are disclosed. Their mRNA **expression** profile in various **human** tissues is provided. Methods for **expressing** and preparing related products using **recombinant** cells are described. These **recombinant** cells, the enzyme, or nucleic acids encoding the enzyme are useful in screening for modulators of the enzymic activity or gene **expression**. Methods of screening for its modulators and using them for the treatment of various disease and their effectiveness (in vivo testing of compds./target validation) are described. Reagents that regulate **human serine-threonine** protein **kinase** and reagents which bind to **human serine -threonine** protein **kinase** gene products can play a role in preventing, ameliorating, or correcting dysfunctions or diseases including, but not limited to, cancer, diabetes, COPD, and peripheral and central nervous system disorders.

L15 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:315403 HCAPLUS
DOCUMENT NUMBER: 131:99243
TITLE: Characterization of a novel type of **serine/ threonine kinase** that specifically phosphorylates the **human** Goodpasture antigen
AUTHOR(S): Raya, Angel; Revert, Fernando; Navarro, Samuel; Saus, Juan
CORPORATE SOURCE: Fundacion Valenciana de Investigaciones Biomedicas, Instituto de Investigaciones Citologicas, Valencia, 46010, Spain

SOURCE: Journal of Biological Chemistry (1999), 274(18), 12642-12649
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Goodpasture disease is an autoimmune disorder that occurs naturally only in **humans**. Also exclusive to **humans** is the phosphorylation process that targets the unique N-terminal region of the Goodpasture antigen. Here the authors report the mol. **cloning** of GPBP (Goodpasture antigen-binding protein), a previously unknown 624-residue polypeptide. Although the predicted sequence does not meet the conventional structural requirements for a protein **kinase**, its **recombinant** counterpart specifically binds to and phosphorylates the exclusive N-terminal region of the **human** Goodpasture antigen in vitro. This novel **kinase** is widely **expressed** in **human** tissues but shows preferential **expression** in the histol. structures that are targets of common autoimmune responses. The work presented in this report highlights a novel gene to be explored in **human** autoimmunity.

REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:513247 HCAPLUS
DOCUMENT NUMBER: 129:240625
TITLE: **Human** ULK1, a novel **serine/threonine kinase** related to UNC-51 **kinase** of Caenorhabditis elegans: cDNA **cloning**, **expression**, and chromosomal assignment
AUTHOR(S): Kuroyanagi, Hidehito; Yan, Jin; Seki, Naohiko; Yamanouchi, Yasuko; Suzuki, Yo-ichi; Takano, Takako; Muramatsu, Masa-aki; Shirasawa, Takuji
CORPORATE SOURCE: Department of Mol. Genetics, Tokyo Metropolitan Inst. of Gerontology, Tokyo, 173-0015, Japan
SOURCE: Genomics (1998), 51(1), 76-85
CODEN: GNMCEP; ISSN: 0888-7543
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The unc-51 gene, isolated from mutants of Caenorhabditis elegans exhibiting abnormal axonal extension and growth, encodes a novel **serine/threonine kinase** (K. Ogura, et al., 1994, Genes Dev. 8: 2389-2400). Here we report the mol. **cloning** and characterization of the **human** homolog of UNC-51, designated ULK1, for UNC-51 (C. elegans)-like **kinase** 1. Sequence anal. of the **human** ULK1 cDNA showed that an open reading frame is composed of 1050 amino acids with a calculated MW of 112.6 kDa and a pI of 8.80. Homol. search anal. showed that ULK1 has 41% overall similarity to UNC-51 and 29% similarity to Apg1p of Saccharomyces cerevisiae. Phylogenetic anal. of ULK1, UNC-51, and Agg1p suggested that they constitute a novel subfamily of **serine/threonine kinases**. Southern blot analyses suggested that the ULK1 gene spans 30-40 kb in the **human** genome as a single-copy gene. Zoo blot anal. indicated that ULK1 **kinase** is conserved among vertebrates including mammals, birds, reptiles, amphibians, and fish. Northern blot anal. revealed that ULK1 is ubiquitously **expressed** in adult **human** tissues such as skeletal muscle, heart, pancreas, brain, **placenta**, liver, kidney, and **lung**, whereas UNC-51 is specifically detected in the nervous system of C. elegans. Both FISH and RH mapping confirmed the regional localization of ULK1 to

human chromosome 12q24.3. (c) 1998 Academic Press.
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:498524 HCAPLUS
DOCUMENT NUMBER: 125:215535
TITLE: prk, A cytokine-inducible **human** protein **serine/threonine kinase** whose **expression** appears to be down-regulated in **lung carcinomas**
AUTHOR(S): Li, Bo; Ouyang, Bin; Pan, Huiqi; Reissmann, Peter T.; Slamon, Dennis J.; Arceci, Robert; Lu, Luo; Dai, Wei
CORPORATE SOURCE: Div. Hematol. Oncol., Univ. Cincinnati Coll. Med., Cincinnati, OH, 45267, USA
SOURCE: Journal of Biological Chemistry (1996), 271(32), 19402-19408
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have **cloned** and characterized a putative protein **serine/threonine kinase** termed prk through a combination of polymerase chain reaction and conventional cDNA library screening approaches. There are apparently two distinct domains within prk protein deduced from its nucleotide sequences. The amino-terminal portion has the feature of the catalytic domain of a **serine/threonine kinase** and shows strong homol. to mouse fnk and other polo family **kinases** including mouse snk, **human** and murine plk, Drosophila polo, and yeast Cdc5. The carboxyl-terminal portion, presumably the regulatory domain, shares extensive homol. to mouse fnk. Northern blotting analyses reveal that prk **expression** is restricted to a very limited number of tissues with **placenta**, ovaries, and **lung** containing detectable amts. of prk mRNA. Prk mRNA **expression** is also detected at a low level in the megakaryocytic cell line Dami, MO7e, and three brain glioma cell lines. In addition, refeeding of serum-deprived MO7e, Dami, and K562 cells of hematopoietic origin and GMOO637D of **lung** fibroblasts rapidly activates prk mRNA **expression** with its peak induction around 2 h after serum addition Prk gene activation by the serum requires no new protein synthesis.
The **recombinant** cytokines such as interleukin-3 and thrombopoietin also activate prk mRNA **expression** in MO7e cells. Furthermore, a survey of RNAs isolated cancer patients reveals that prk mRNA **expression** is significantly down-regulated in tumor tissues. Southern blotting anal. indicates that the prk gene is present in a single copy in the genome of tumors and normal cells. Taken together, these results suggest that prk **expression** may be restricted to proliferating cells and involved in the regulation of cell cycle progression. The mol. **cloning** of prk cDNA will facilitate the study of its biol. role as well as its potential role in tumorigenesis.

L15 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:727998 HCAPLUS
DOCUMENT NUMBER: 123:277512
TITLE: A **human** homolog of the Drosophila tumor suppressor gene l(2)gl maps to 17p11.2-12 and codes for a cytoskeletal protein that associates with nonmuscle myosin II heavy chain
AUTHOR(S): Strand, Dennis; Unger, Sylvia; Corvi, Raffaella; Hartenstein, Kirsten; Schenkel, Heide; Kalmes,

Andreas; Merdes, Gunter; Neumann, Beate; Krieg-Schneider, Frank
CORPORATE SOURCE: Dep. of Developmental Genetics, Deutsches Krebsforschungszentrum, Heidelberg, D-69120, Germany
SOURCE: Oncogene (1995), 11(2), 291-301
CODEN: ONCNES; ISSN: 0950-9232
PUBLISHER: Macmillan Scientific & Medical Division
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Inactivation of the tumor suppressor gene lethal(2) giant larvae (D-lgl) of Drosophila leads to malignant transformation of the presumptive adult optic centers in the larval brain and tumors of the imaginal disks. These malignancies result from the disorganization of a cytoskeletal network in which the D-LGL protein participates. Here we describe the isolation of a cDNA encoding the **human** homolog to the D-lgl gene designated as hugl. The hugl cDNA detects a locus spanning at least 25 kilobases (kb) in **human** chromosome band 17p11.2-12, which is centromeric to the p53 gene and recognizes a 4.5 kb RNA transcript. The hugl gene is **expressed** in brain, kidney and muscle but is barely seen in heart and **placenta**. Sequence anal. of the hugl cDNA demonstrates a long open reading frame, which has the potential to encode a protein of 1057 amino acids with a predicted mol. weight of 115 kdalton (kD). To further substantiate and identify the HUGL protein, we have prepared polyclonal rabbit antibodies against synthetic peptides corresponding to the amino and carboxyl termini of the conceptual translation product of the hugl gene. The affinity-purified anti-HUGL antibodies recognize a single protein with an apparent mol. weight of .apprx.115 kD. Similar to the Drosophila protein, HUGL is part of a cytoskeletal network and, is associated with nonmuscle myosin II heavy chain and a **kinase** that specifically phosphorylates HUGL at **serine** residues.

L15 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:318218 HCAPLUS
DOCUMENT NUMBER: 120:318218
TITLE: Induction and down-regulation of PLK, a **human serine/threonine kinase** **expressed** in proliferating cells and tumors
AUTHOR(S): Holtrich, Uwe; Wolf, Georg; Braeuninger, Andreas; Karn, Thomas; Boehme, Beatrix; Ruebsamen-Waigmann, Helga; Strebhardt, Klaus
CORPORATE SOURCE: Chemotherapeutisches Forschungsinst., Georg-Speyer-Haus, Frankfurt, 60596, Germany
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1994), 91(5), 1736-40
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have identified the nucleotide sequence of the cDNA encoding the **human** counterpart of the mouse gene Plk (polo-like **kinase**). The sequence of the **human** gene, PLK, predicts a **serine/threonine kinase** of 603 aa. **Expression** of PLK mRNA appeared to be strongly correlated with the mitotic activity of cells. Resting peripheral lymphocytes did not **express** the gene at all. When primary T cells were activated by phytohemagglutinin, a high level of PLK transcripts resulted within 2-3 days. In some cases, addition of interleukin 2 to these cells increased the **expression** of PLK mRNA further. In contrast, primary cultures of **human** peripheral macrophages, which were not dividing under the culture conditions applied, showed very little or no PLK mRNA. Stimulation of these cells by bacterial lipopolysaccharide, and inducer of several cytokines in macrophages, totally abrogated the **expression**

of PLK mRNA. In line with a function of PLK mRNA **expression** in mitotically active cells is the authors' finding that six immortalized cell lines examined **expressed** the gene. In A-431 epidermoid **carcinoma** cells this **expression** was down-regulated by serum starvation and enhanced after serum was added again. Tumors of various origin (**lung**, colon, stomach, smooth muscle, and esophagus as well as non-Hodgkin lymphomas) **expressed** high levels of PLK transcripts in about 80% of the samples studied, whereas PLK mRNA was absent in surrounding tissue, except for colon. The only normal tissues where PLK mRNA **expression** was observed were colon and **placenta**, both known to be mitotically active. No PLK transcripts were found in normal adult **lung**, brain, heart, liver, kidney, skeletal muscle, and pancreas. In Northern blot expts. with RNA from lymphocytes which were treated with phytohemagglutinin and cycloheximide, PLK transcripts were not detectable, suggesting that PLK is not an early growth-response gene.

L15 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:264453 HCAPLUS
DOCUMENT NUMBER: 120:264453
TITLE: Prokaryotic **expression cloning** of a novel **human** tyrosine **kinase**
AUTHOR(S): Beeler, John F.; LaRochelle, William J.; Chedid, Marcio; Tronick, Steven R.; Aaronson, Stuart A.
CORPORATE SOURCE: Lab. Cell. Mol. Biol., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Molecular and Cellular Biology (1994), 14(2), 982-8
CODEN: MCEBD4; ISSN: 0270-7306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Screening of a **human** embryonic **lung** fibroblast cDNA **expression** library with antiphosphotyrosine antibodies led to isolation of a novel protein **kinase**. A **clone**, designated A6, contained a 3-kb cDNA insert with a predicted open reading frame of 350 amino acids. DNA sequence anal. failed to reveal any detectable similarity with previously known genes, and the predicted A6 protein lacked any of the motifs commonly conserved in the catalytic domains of protein **kinases**. However, the bacterially **expressed** β-galactosidase-A6 fusion protein demonstrated both tyrosine and **serine** phosphorylation in an in vitro **kinase** assay and phosphorylated exogenous substrates including myelin basic protein specifically on tyrosine residues. The enzyme also displayed biochem. properties analogous to those of other protein tyrosine **kinases**. The A6 gene was found to be **expressed** widely at the transcript level in normal tissues and was evolutionarily conserved. Thus, A6 represents a novel tyrosine **kinase** which is highly divergent from previously described members of this important class of regulatory mols.

L15 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:695669 HCAPLUS
DOCUMENT NUMBER: 121:295669
TITLE: Identification and characterization of DBK, a novel putative **serine/threonine** protein **kinase** from **human** endothelial cells
AUTHOR(S): Chu, Wei; Presky, David H.; Danho, Waleed; Swerlick, Robert A.; Burns, Daniel K.
CORPORATE SOURCE: Dep. Inflammation/Autoimmune Diseases, Hoffman-La Roche Inc., Nutely, NJ, USA
SOURCE: European Journal of Biochemistry (1994), 225(2), 695-72
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Protein **kinases** are involved in signal transduction pathways and play important roles in the regulation of cell functions. CDNA **clones** encoding a novel **serine/threonine** protein **kinase** sequence, designated as DBIC, were isolated from cDNA libraries made from **human** endothelial cells. The compiled nucleotide sequence 1636 base pairs long, consisting of an open reading frame encoding a 479-amino-acid protein with a calculated mol. mass of 53 kDa.

The deduced amino acid sequence contains a protein **kinase** catalytic domain of 263 residues which includes all the characteristic features of a **serine/threonine** protein **kinase**. The invariant amino acid residues scattered throughout the catalytic domain of almost all known protein **kinases** are also found in DBK. Sequence comparison of DBK catalytic domain shows approx. 51% sequence identities to that of **human** protein **kinase** C family members. DBK shares the highest sequence identity, 53%, to that of Drosophila PKC. Northern blot anal. of various **human** tissues and cultured cell lines with a DBK gene-specific cDNA probe demonstrated a single band of 2.0 kb that is **expressed** in all tissues and cell lines examined Although the **expression** of DBK **kinase** was detected in all **human** tissues analyzed, the levels of **expression** varied significantly, with the highest **expression** detected in **lung** and heart, and the lowest **expression** found in brain and liver. Anti-DBK peptide-specific rabbit antisera were prepared, and were capable of immunopptg. DBK protein from COS cells transfected with DBK cDNA. The DBK gene is a single-copy gene, and is highly conserved across species from **human** to yeast. Using somatic cell hybrids, the DBK gene has been localized to **human** chromosome 14. The ubiquitous **expression** and high degree of conservation of DBK across species suggest that DBK may play an important role in cell functions.

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E3          853 --> WEBSTER M/AU
E4          189     WEBSTER M A/AU
E5            4     WEBSTER M B/AU
E6           11     WEBSTER M C/AU
E7           52     WEBSTER M D/AU
E8            4     WEBSTER M DOROTHY/AU
E9          145     WEBSTER M E/AU
E10          51     WEBSTER M E D/AU
E11         118     WEBSTER M F/AU
E12           1     WEBSTER M F H/AU

=> s e3
L16         853 "WEBSTER M"/AU

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E3         1118 --> YAN C/AU
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E5          124     YAN C C/AU
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E6           1     DIFRANCESO D/AU
E7           2     DIFRANCESO L/AU
E8           1     DIFRANCESO R/AU
E9           1     DIFRANCESO ROBIN/AU
E10          1     DIFRANCESSO L/AU
E11          6     DIFRANCIA C/AU
E12          4     DIFRANCIA CELENE/AU

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E2           1     BEASLEY DWC/AU
E3          29 --> BEASLEY E/AU
E4           2     BEASLEY E C/AU
E5           2     BEASLEY E D/AU
E6          16     BEASLEY E G/AU
E7           1     BEASLEY E H/AU
E8           6     BEASLEY E L/AU
E9         324     BEASLEY E M/AU
E10          7     BEASLEY E O/AU
E11          1     BEASLEY E S G/AU
E12          2     BEASLEY E T/AU

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in at least one of the files.  Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):end

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'E3' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files.  Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
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=> d his

     (FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005
L1      1303457 S KINASE?
L2       431794 S SERINE OR THREONINE
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L3       107695 S L1 AND L2
L4        44729 S HUMAN AND L3
L5      7008658 S CLON? OR EXPRESS? OR RECOMBINANT
L6           23 S HUMAN (A)L1(A)L2
L7           23 DUP REM L6 (0 DUPLICATES REMOVED)
L8        26206 S L4 AND L5
L9        13226 S "CHROMOSOME 13"
L10          23 S L8 AND L9
L11          15 DUP REM L10 (8 DUPLICATES REMOVED)
L12     3112750 S LUNG OR CARCINOMA OR PLACENTA
L13        3424 S L8 AND L12
L14          12 S L6 AND L13
L15          12 DUP REM L14 (0 DUPLICATES REMOVED)
                E WEBSTER M/AU
L16         853 S E3
                E YAN C/AU
L17        1118 S E3
                E DIFRANCESCO V/AU
L18         117 S E3-E4
                E BEASLEY E/AU
L19          29 S E3

=> s l16 or l17 or l18 or l19
L20       2087 L16 OR L17 OR L18 OR L19

=> s l8 and l20
L21         10 L8 AND L20

=> dup rem l21
PROCESSING COMPLETED FOR L21
L22           8 DUP REM L21 (2 DUPLICATES REMOVED)

=> d 1-8 ibib ab

L22   ANSWER 1 OF 8  BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-11100  BIOTECHDS
TITLE:            Novel human kinase protein, related to
                  serine/threonine kinase
                  subfamily, useful as model for developing human
                  therapeutic targets and serves as target for human
                  therapeutics;
                     vector-mediated protein-kinase gene transfer and
                     expression in host cell for recombinant
                     protein production, drug screening and gene therapy
AUTHOR:           NEELAM B; YAN X; YAN C
PATENT ASSIGNEE:  APPLERA CORP
PATENT INFO:      US 2003207311 6 Nov 2003
APPLICATION INFO: US 2003-427923 2 May 2003
PRIORITY INFO:    US 2003-427923 2 May 2003; US 2002-377592 6 May 2002
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2004-166978 [16]
AB    DERWENT ABSTRACT:
      NOVELTY - An isolated human kinase peptide (I) that
      is related to serine/threonine kinase
      subfamily, consisting or comprising a fully defined sequence of 318 amino
      acids (S2) as given in the specification, or its fragment comprising 10
      contiguous amino acids, or an amino acid sequence of an allelic variant
      or ortholog of the amino acid sequence of (S2), is new.
           DETAILED DESCRIPTION - An isolated human kinase
      peptide (I) that is related to serine/threonine
      kinase subfamily, consisting or comprising: (a) a fully defined
      sequence of 318 amino acids (S2) as given in the specification, or its
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fragment comprising 10 contiguous amino acids; (b) an amino acid sequence of an allelic variant or ortholog of the amino acid sequence of (S2), where the allelic variant or ortholog is encoded by a nucleic acid molecule that hybridizes under stringent conditions to the opposite strand of a nucleic acid molecule having a fully defined sequence of 957 (S1) (a cDNA molecule) or 105413 (genomic sequence) nucleotides (S3) as given in the specification; or (c) a fragment of an amino acid sequence of (S2), comprising 10 contiguous amino acids. The isolated **human kinase** peptide variant has an amino acid sequence that shares 70% homology with (S2). INDEPENDENT CLAIMS are also included for the following: (1) an isolated antibody (II) that selectively binds to (I) comprising the amino acid sequence of (S2), its allelic variant or ortholog, or fragment; (2) an isolated nucleic acid molecule (III) consisting or comprising of a nucleotide sequence that encodes (I) or a nucleotide sequence that is complement of the nucleotide sequence encoding (I), where allelic variant of (III) encoding a **human kinase** peptide shares at least 80% homology with (S1) or (S3); (3) a gene chip comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (4) a transgenic non-**human** animal comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (5) a nucleic acid vector (IV) comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (6) a host cell comprising (IV); (7) preparation of (I); (8) detecting the presence of (I) in a sample involves contacting the sample with a detection agent that specifically allows detection of the presence of the peptide in the sample; (9) detecting the presence of (III) in a sample involves contacting the sample with an oligonucleotide that hybridizes to the nucleic acid molecule under stringent conditions and determining whether an oligonucleotide binds to the nucleic acid molecule in the sample; and (10) a pharmaceutical composition (V) comprising an agent that binds to (I), and identified using (I) (comprising a sequence of (S2), its allelic variant or ortholog or fragment), and a carrier; and (11) a method for identifying a modulator of a **human kinase** peptide, comprising administering the agent to a host cell comprising an **expression** vector that **expresses** the peptide, optionally involves contacting a cell **expressing** the peptide with an agent, and determining if the agent has modulated the **expression** of the peptide.

WIDER DISCLOSURE - The following are disclosed: (1) chimeric or fusion proteins comprising (I); (2) agents identified using screening methods involving (I); (3) non-coding fragments of a nucleic acid molecule having a sequence of (S1) or (S3); (4) kit comprising (II) for detecting (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment; (5) kits for detecting the presence of nucleic acid encoding **kinase** peptide in a biological sample; (6) analogs or derivatives of (I); and (7) compartmentalized kits comprising necessary reagents for carrying out the above mentioned assays.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard **recombinant** techniques (claimed). Preferred Molecules: The allelic variants of (I) and (III) preferably share 90% homology with (S2), and (S1) or (S3), respectively.

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy; (I) **expression** or activity modulator. No supporting biological data is given.

USE - (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment, is useful for identifying a modulator of a **human kinase** peptide. (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment is also useful for identifying an agent that binds to it. (V) is useful for treating a disease or condition mediated by **human kinase** peptide (all claimed). (I) and (III) can be used as models for the development of **human** therapeutic targets, aid in the

identification of therapeutic proteins and serve as targets for the development of **human** therapeutic agents that modulate **kinase** activity in cells and tissue that **express** the **kinase**. (I) and (III) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially **expressed**. (II) is useful for isolating (I), purifying (I), and to assess **expression** of (I) in active stages of a disease, or. in an individual with a predisposition towards disease related to the protein's function. The antibodies are also useful for assessing normal and aberrant subcellular localization of cells in various tissues in an organism, in pharmacogenomic analysis, for tissue typing and for inhibiting protein function. (III) is useful as probes, primers, chemical intermediates and in biological assays. The nucleic acid molecules are useful for constructing **recombinant** vectors, host cells and transgenic animals, and for designing ribozymes. The nucleic acids are also useful in drug screening assays and as a target for treatment by the compounds identified through drug screening. The nucleic acid molecules are also useful for monitoring effectiveness of modulating compounds on the **expression** or activity of **kinase** gene in clinical trials or in treatment regimen, and for testing an individual for a genotype that while not necessarily causing the disease nevertheless affects the treatment modality. The nucleic acid molecules are also useful in diagnostic assays for qualitative changes in **expression** of nucleic acid encoding **kinase** and particularly in qualitative changes that lead to pathology. The nucleic acid molecules can be used to detect mutations in genes encoding **kinases** and gene **expression** products such as mRNA. Detection of mutated form of gene encoding **kinase** associated with a dysfunction provides a diagnostic tool for a active disease or susceptibility to disease which results from overexpression, underexpression or altered **expression** of **kinase** protein. (III) also provides vectors for gene therapy in patients with aberrant **expression** of gene encoding **kinase**.

EXAMPLE - None given.(128 pages)

L22 ANSWER 2 OF 8 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-01882 BIOTECHDS
TITLE: New peptides related to **serine/threonine** protein **kinase** subfamily, useful for treating disorders associated with abnormal **expression** of **kinase** in prostate, lungs and brain, in drug screening assays and pharmacogenomic analysis; **recombinant** protein production and sense and antisense sequence use in gene therapy
AUTHOR: BEASLEY E M; YE J; **YAN C**; KETCHUM K A; DI FRANCESCO V
PATENT ASSIGNEE: PE CORP NY
PATENT INFO: WO 2002059288 1 Aug 2002
APPLICATION INFO: WO 2002-US930 15 Jan 2002
PRIORITY INFO: US 2001-819607 29 Mar 2001; US 2001-263162 23 Jan 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-599781 [64]
AB DERWENT ABSTRACT:
NOVELTY - Isolated peptide (I) comprising: (a) a fully defined sequence of 369 amino acids (P1), given in the specification; (b) an allelic variant or ortholog of (P1) encoded by a nucleic acid molecule that hybridizes under stringent conditions to the opposite strand of the nucleic acid molecule comprising a fully defined sequence of 1864 (S1) or

25603 (S2) bp, given in the specification; or (c) a fragment of (P1) comprising at least 10 contiguous amino acids, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an isolated antibody that selectively binds to (I); (2) an isolated nucleic acid molecule (II) comprising a sequence encoding (I), or its complement; (3) a gene chip comprising (II); (4) a transgenic non-**human** animal comprising (II); (5) a nucleic acid vector comprising (II); (6) a host cell containing the vector; (7) producing (I), comprising: (a) introducing a nucleotide sequence encoding the amino acid sequence of (I) into a host cell; and (b) culturing the host cell under conditions suitable for the **expression** of the peptide from the nucleotide sequence; (8) detecting the presence of (I) in a sample, comprising contacting the sample with a detection agent that specifically allows detection of the presence of the peptide in the sample then detecting the presence of the peptide; (9) detecting the presence of (II) in a sample, comprising: (a) contacting the sample with an oligonucleotide that hybridizes to (II) under stringent conditions; and (b) determining whether the oligonucleotide binds to (II) in the sample; (10) identifying a modulator of (I) or its **expression**, comprising contacting (I) or a cell **expressing** (I) with an agent and determining if the agent modulated the function or activity, or **expression** of the peptide; (11) identifying an agent that binds to (I), comprising contacting the peptide with an agent and assaying the contacted mixture to determine whether a complex is formed with the agent bound to the peptide; (12) a pharmaceutical composition comprising the agent and a carrier;(13) treating a disease or condition mediated by **human kinase** protein, comprising administering to a patient the agent; (14) an isolated **human kinase** peptide comprising a sequence that is at least 70% identical to a (P1); (15) an isolated nucleic acid molecule encoding a **human kinase** peptide, which is at least 80% identical to (S1) or (S2).

BIOTECHNOLOGY - Preferred Method: Identifying a modulator of (I) comprises administration of the agent to a host cell containing the vector that **expresses** (I). Preferred Peptide: The **human kinase** peptide is preferably 90% identical to (P1). Preferred Nucleic Acid: The nucleic acid molecule in (15) is preferably 90% identical to (S1) or (S2).

ACTIVITY - Cytostatic. No suitable data given.

MECHANISM OF ACTION - Protein **kinase**; Gene therapy.

USE - (I) are useful in substantial and specific assays related to functional information of the peptide sequences, to raise antibodies or to elicit immune response, as reagents in assays to determine the levels of protein in biological fluids, and as markers for tissues where the corresponding protein is **expressed**. The peptides and antibodies are useful in drug screening assays, tissue typing and pharmacogenomic analysis. They are also useful in treating disorders associated with the absence of, inappropriate, or unwanted **expression** of **kinase** protein in prostate, lungs or brain. The nucleic acid molecules are useful for probes, primers and chemical intermediates in biological assays, for constructing **recombinant** vectors, **expressing** antigenic portions of the protein. The peptide and nucleic acid sequences are useful as models for the development of **human** therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of **human** therapeutic agents that modulate **kinase** activity in cells and tissues that **express** the **kinase**. The host cells are useful in producing a **kinase** protein or peptide, and non-**human** transgenic animals.

EXAMPLE - No suitable example given.(86 pages)

L22 ANSWER 3 OF 8 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-12722 BIOTECHDS
TITLE: A **human kinase** protein that is related to

the **serine/threonine kinase** subfamily, useful as models for development of **human** therapeutic targets and serves as targets for developing **human** therapeutic agents;
antibody, DNA chip, transgenic animal generation, fusion protein, drug screening, DNA probe, DNA primer and ribozyme, useful for gene therapy, diagnosis, pharmacogenomics analysis, clinical trial and **expression** profiling

AUTHOR: **WEBSTER M**; LI Z; KETCHUM K A; DI FRANCESCO V; BEASLEY E M
PATENT ASSIGNEE: APPLERA CORP
PATENT INFO: WO 2002018553 7 Mar 2002
APPLICATION INFO: WO 2000-US26260 31 Aug 2000
PRIORITY INFO: US 2001-797908 5 Mar 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-304251 [34]

AB DERWENT ABSTRACT:
NOVELTY - An isolated **human kinase** protein (I) that is related to **serine/threonine kinase** subfamily, consisting of or comprising a fully defined 328 (S2) or 135 (S5) amino acid sequence given in the specification, or its fragment comprising 10 contiguous amino acids, or an amino acid sequence of an allelic variant or ortholog of the amino acid sequence of (S2) or (S5), is new.

DETAILED DESCRIPTION - (I) consists or comprises of: an amino acid sequence of (S2) or (S5); an amino acid sequence of an allelic variant or an ortholog of (S2) or (S5), where the allelic variant or ortholog is encoded by a nucleic acid molecule that hybridizes under stringent conditions to the opposite strand of a nucleic acid molecule having a fully defined 990 (S1) or 408 nucleotide (S3) sequence given in the specification; a fragment of an amino acid sequence of (S2) or (S5), comprising 10 contiguous amino acids. The isolated **human kinase** variant has an amino acid sequence that shares 70% homology with (S2) or (S5). INDEPENDENT CLAIMS are also included for the following: (1) an isolated antibody (II) that selectively binds to (I) comprising the amino acid sequence of (S2) or (S5), its allelic variant or ortholog, or fragment; (2) an isolated nucleic acid molecule (III) consisting or comprising of a nucleotide sequence that encodes (I) or a nucleotide sequence that is a complement of the nucleotide sequence encoding (I), where the allelic variant of (III) encoding a **human kinase** peptide shares at least 80% homology with (S1) or (S3); (3) a gene chip comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (4) a transgenic non-**human** animal comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (5) a nucleic acid vector (IV) comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (6) a host cell comprising (IV); (7) preparation of (I); (8) detecting the presence of (I) in a sample involves contacting the sample with a detection agent that specifically allows detection of the presence of the peptide in the sample; (9) detecting the presence of (III) in a sample involves contacting the sample with an oligonucleotide that hybridizes to the nucleic acid molecule under stringent conditions and determining whether an oligonucleotide binds to the nucleic acid molecule in the sample; and (10) a pharmaceutical composition (V) comprising an agent that binds to (I), and was identified using (I) (comprising a sequence of (S2) or (S5), its allelic variant or ortholog or fragment), and a carrier.

WIDER DISCLOSURE - Disclosed are: (a) chimeric or fusion proteins comprising (I); (b) agents identified using screening methods involving (I); (c) non-coding fragments of a nucleic acid molecule having a sequence of (S1) or (S3); (d) a kit comprising (II) for detecting (I)

comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment; (e) kits for detecting the presence of **kinase** nucleic acid in a biological sample; (f) analogs or derivatives of (I); and (g) compartmentalized kits comprising necessary reagents for carrying out the above mentioned assays.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard **recombinant** techniques (claimed). Preferred Molecules: The allelic variants of (I) and (III) preferably share 90% homology with (S2) or (S5), and (S1) or (S3), respectively.

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy; (I) **expression** or activity modulator. No suitable data given.

USE - (I) comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment, is useful for identifying a modulator of a **human kinase** protein; preferably, the agent is administered to a host cell comprising an **expression** vector that **expresses** the peptide. The method optionally involves contacting a cell **expressing** the peptide with an agent and determining if the agent has modulated the **expression** of the peptide. (I) comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment is also useful for identifying an agent that binds to it. (V) is useful for treating a disease or condition mediated by **human kinase** protein (all claimed). (I) and (III) can be used as models for the development of **human** therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of **human** therapeutic agents that modulate **kinase** activity in cells and tissue that **express** the **kinase**. (I) and (III) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially **expressed**. The **kinases** isolated from **humans** and their **human**/mammalian orthologs serve as targets for identifying agents for use in mammalian therapeutic applications, and biological assays related to **kinases** that are related to members of the **serine/threonine kinase** subfamily. The proteins can also be used in screening assays to screen a compound for its ability to stimulate or inhibit interaction between **kinase** protein and a molecule that normally interacts with the **kinase** protein. The proteins also provide a target for diagnosing a disease or predisposition to disease mediated by the peptide, and in pharmacogenomic analysis. The peptides are also useful for treating a disorder characterized by absence of, inappropriate or unwanted **expression** of the protein. (II) is useful for isolating (I), purifying (I), and to assess **expression** of (I) in active stages of a disease, or in an individual with a predisposition towards disease related to the protein's function. The antibodies are also useful for assessing normal and aberrant subcellular localization of cells in various tissues in an organism, in pharmacogenomic analysis, for tissue typing and for inhibiting protein function. (III) is useful as probes, primers, chemical intermediates and in biological assays. The nucleic acid molecules are useful for constructing **recombinant** vectors, host cells and transgenic animals, and for designing ribozymes. The nucleic acids are also useful in drug screening assays and as a target for treatment by the compounds identified through drug screening. The nucleic acid molecules are also useful for monitoring effectiveness of modulating compounds on the **expression** or activity of the **kinase** gene in clinical trials or in a treatment regimen, and for testing an individual for a genotype that while not necessarily causing the disease nevertheless affects the treatment modality. The nucleic acid molecules are also useful in diagnostic assays for qualitative changes in

kinase nucleic acid **expression** and particularly in qualitative changes that lead to pathology. The nucleic acid molecules can be used to detect mutations in **kinase** genes and gene **expression** products such as mRNA. Detection of a mutated form of the **kinase** gene associated with a dysfunction provides a diagnostic tool for active disease or susceptibility to disease which results from overexpression, underexpression or altered **expression** of the **kinase** protein. (III) also provides vectors for gene therapy in patients with aberrant **kinase** gene **expression**.

ADMINISTRATION - No details given.

EXAMPLE - None given. (65 pages)

L22 ANSWER 4 OF 8 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-19955 BIOTECHDS
TITLE: An isolated LIM domain **kinase** polypeptide useful as a model for developing **human** therapeutic targets, to aid in identification of therapeutics and to serve as targets for developing **kinase** activity modulators in cells;
recombinant enzyme protein production for use in disease therapy and diagnosis
AUTHOR: **YAN C**; KETCHUM K A; DI FRANCESCO V; BEASLEY E M
PATENT ASSIGNEE: PE CORP NY
PATENT INFO: US 6403353 11 Jun 2002
APPLICATION INFO: US 2001-978197 22 Mar 2001
PRIORITY INFO: US 2001-978197 17 Oct 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-536038 [57]
AB DERWENT ABSTRACT:

NOVELTY - An isolated LIM domain **kinase** (LIMK) polypeptide (I) having a fully defined sequence of 255 amino acids as given in specification, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a composition comprising (I) and a carrier.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard **recombinant** techniques.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - (I) can be used as a model for the development of **human** therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of **human** therapeutic agents that modulate **kinase** activity in cells and tissue that **express** the **kinase**. (I) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially **expressed**. The **kinase** proteins isolated from **humans** and their **human**/mammalian orthologs serve as targets for identifying agents for use in mammalian therapeutic applications, and biological assays related to **kinase** proteins that are related to members of the **serine/threonine** subfamily. The proteins can also be used in screening assays to screen a compound for its ability to stimulate or inhibit interaction between **kinase** protein and a molecule that normally interacts with the **kinase** protein. The proteins also provide a target for diagnosing a disease or predisposition to disease mediated by the peptide, and in pharmacogenomic analysis. The peptides are also useful for treating a disorder characterized by absence of, inappropriate or unwanted **expression** of the protein. The

proteins are useful in drug screening assays; end point assays to identify compounds that modulate **kinase** activity; in competition binding assays in methods designed to discover compounds that interact with the **kinase**; as a target for diagnosing active protein activity, disease or predisposition to disease in a patient with the variant peptide, particularly activities and conditions that are known for other members of the **serine/threonine kinase** subfamily proteins.

ADMINISTRATION - No details given.

EXAMPLE - No preparative example given. (82 pages)

L22 ANSWER 5 OF 8 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-17807 BIOTECHDS
TITLE: Nucleic acid molecules encoding calcium/calmodulin-dependent protein **kinases**, useful for preventing diagnosing and treating e.g. cancers, psoriasis and inflammation; **recombinant** protein production by vector-mediated gene transfer and **expression** in host cell, useful for gene therapy
AUTHOR: YE J; **YAN C**; DI FRANCESCO V; BEASLEY E M
PATENT ASSIGNEE: PE CORP NY
PATENT INFO: US 6387677 14 May 2002
APPLICATION INFO: US 2001-800960 8 Mar 2001
PRIORITY INFO: US 2001-800960 8 Mar 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-478444 [51]
AB DERWENT ABSTRACT:

NOVELTY - An isolated nucleic acid molecule (I) encoding a calcium/calmodulin-dependent protein **kinase**, is new.

DETAILED DESCRIPTION - An isolated nucleic acid molecule (I) encoding a calcium/calmodulin-dependent protein **kinase**, comprising a nucleotide sequence selected from: (a) a nucleotide sequence that encodes a protein comprising a fully defined 565 amino acid sequence (A1) given in the specification; (b) a nucleotide sequence comprising the fully defined 2061 nucleotide sequence (N1) given in the specification ((N1) is a complementary deoxyribonucleic acid (cDNA) encoding the **kinase**); and/or (c) a nucleotide sequence comprising the defined 62804 nucleotide sequence (N2) given in the specification ((N2) is a genomic sequence that spans the gene encoding the **kinase** protein). INDEPENDENT CLAIMS are also included for: (1) a nucleic acid vector (II) comprising (I); (2) a host cell (III) containing the vector (II); (3) producing (IV) a polypeptide comprising (A1), comprising culturing the host cell (III) under conditions sufficient for the production of said polypeptide, and recovering said polypeptide from the host cell culture; and (4) an isolated nucleic acid molecule (I') comprising a nucleotide sequence that is completely complementary to (I).

BIOTECHNOLOGY - Preferred Vectors: The vector (II) is a plasmid, virus or bacteriophage. (I) is inserted into the vector in proper orientation and correct reading frame so that the protein of (A1) may be **expressed** by a cell transformed with the vector. The isolated nucleic acid molecule may be operatively linked to a promoter sequence. Preparation: (I) and the protein it encodes may be produced via standard **recombinant** and synthetic methodologies e.g. by culturing (IV) the cell (III) (claimed).

ACTIVITY - Cytostatic; Anti-inflammatory; Anti-arteriosclerotic; Anti-psoriatic. No biological data given.

MECHANISM OF ACTION - Gene therapy; Protein therapy; Vaccine; Enzymatic (calcium/calmodulin-dependent protein **kinase**). The gene (I) and encoded protein are related to the family of calcium/calmodulin-dependent protein **kinases**, which are **serine/threonine kinases**. The protein shows a particularly high degree of similarity to calcium/calmodulin-dependent

protein **kinase** II (CaM II). CaM II is comprised of alpha, beta, gamma, and delta subunits. Each subunit is encoded by a separate gene and alternatively splice forms of each subunit have been found (Breen et al., Biochem. Biophys. Res. Commun. 236 (2), 473-478 (1997)). CaM II exerts important effects on hormones and neurotransmitters that utilize calcium as a second messenger. Beta-cell CaM II activity is associated with insulin secretion, and multiple isoforms of CaM II are **expressed** in **human** islets of Langerhans (Breen et al., Biochem. Biophys. Res. Commun. 236 (2), 473-478 (1997)). It has been suggested that CaM II controls activation-induced cellular differentiation, and is important for imparting antigen-dependent memory to T cells (Bui et al., Cell 100: 457-467, 2000).

USE - These polynucleotide sequences (I) and the peptides they encode can be used as models for the development of **human** therapeutic targets, aid in the identification of therapeutic proteins, and serve as targets for the development of **human** therapeutic agents that modulate **kinase** activity in cells and tissues that **express** the **kinase**. The calcium/calmodulin-dependent protein **kinase** encoded by (I) is **expressed** in **humans** in the placenta, breast cancers (including mammary adenocarcinoma), skin melanotic melanomas, ovary adenocarcinomas, uterus leiomyosarcomas, Burkitt's lymphomas (lymph), duodenal adenocarcinomas (small intestine), and fetal brain tumors and in disease conditions including inflammation, arteriosclerosis, and psoriasis (claimed).

ADMINISTRATION - Standard methodologies.

ADVANTAGE - **Kinase** proteins, particularly members of the calcium/calmodulin-dependent protein **kinase** subfamily, are a major target for drug action and development. Accordingly, it is valuable to the field of pharmaceutical development to identify and characterize previously unknown members of this subfamily of **kinase** proteins. (I) Encodes a previously unidentified **human** **kinase** protein that has homology to members of the calcium/calmodulin-dependent protein **kinase** subfamily.

EXAMPLE - No suitable example given.(85 pages)

L22 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:941845 HCAPLUS
DOCUMENT NUMBER: 138:21334
TITLE: Protein, gene and cDNA sequences of a novel **human** protein **kinase** related to **serine/threonine kinase** and their uses in drug screening
INVENTOR(S): Yan, Chunhua; Li, Zhenya; Neelam, Beena; **Difrancesco, Valentina**; Beasley, Ellen M.
PATENT ASSIGNEE(S): PE Corporation (Ny), USA
SOURCE: U.S., 107 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6492156	B1	20021210	US 2001-984890	20011031
US 2003232408	A1	20031218	US 2002-274194	20021021
US 6706511	B2	20040316		
WO 2003038115	A2	20030508	WO 2002-US34869	20021031
WO 2003038115	A3	20040122		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,

PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1451310	A2	20040901	EP 2002-793863	20021031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2004137499	A1	20040715	US 2004-760407	20040121
PRIORITY APPLN. INFO.:			US 2001-984890	A3 20011031
			US 2002-274194	A3 20021021
			WO 2002-US34869	W 20021031

AB The invention provides protein, cDNA and genomic sequences for a novel **human** protein **kinase** related to **serine/threonine kinase**. Specifically, a virtual northern blot shows **serine/threonine kinase** gene **expression** in brain (neuroblastoma), lung (small cell carcinoma), muscle (rhabdomyosarcoma), lymph (Burkitt lymphoma), ovary tumor, placenta (normal and choriocarcinoma), colon (normal, adenocarcinoma, and colon tumor), kidney (renal cell adenocarcinoma), breast, cervix (carcinoma), uterus tumor, pancreas (pancreatic islet), a pooled colon/kidney/stomach sample, and a pooled pancreas/spleen sample. Twenty eight single nucleotide polymorphism has been found on **serine/threonine kinase** gene that has been mapped to chromosome 11. The invention also relates to screening modulator of **serine/threonine kinase** and their uses in therapy. The invention further relates to methods, vector and hosts for **expression** of **serine/threonine kinase**

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 8 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER:	2001512910 MEDLINE
DOCUMENT NUMBER:	PubMed ID: 11560856
TITLE:	p160 Bcr mediates platelet-derived growth factor activation of extracellular signal-regulated **kinase** in vascular smooth muscle cells.
AUTHOR:	Che W; Abe J; Yoshizumi M; Huang Q; Glassman M; Ohta S; Melaragno M G; Poppa V; **Yan C**; Lerner-Marmarosh N; Zhang C; Wu Y; Arlinghaus R; Berk B C
CORPORATE SOURCE:	Center for Cardiovascular Research, University of Rochester, Rochester, NY, USA.
CONTRACT NUMBER:	HL-44721 (NHLBI) HL-49192 (NHLBI) HL-61319 (NHLBI)
SOURCE:	Circulation, (2001 Sep 18) 104 (12) 1399-406. Journal code: 0147763. ISSN: 1524-4539.
PUB. COUNTRY:	United States
DOCUMENT TYPE:	Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:	English
FILE SEGMENT:	Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH:	200110
ENTRY DATE:	Entered STN: 20010919 Last Updated on STN: 20011008 Entered Medline: 20011004

AB BACKGROUND: The **human** Bcr gene was originally identified by its presence in the chimeric Bcr/Abl oncogene, which is causative for chronic myeloblastic leukemia. Because Bcr encodes a **serine/threonine** protein **kinase**, we studied its **kinase** activity and determined the role of Bcr in the PDGF signaling pathway to ERK1/2 activation and DNA synthesis in rat aortic smooth muscle cells

(RASMCs). METHODS AND RESULTS: In RASMCs, platelet-derived growth factor-BB (PDGF) stimulated Bcr **kinase** activity, with a maximum at 1 minute. Because phosphatidylinositol 3'-**kinase** (PI3-K) is essential for Bcr/Abl leukemogenesis, we evaluated the role of mouse PDGF-beta-receptor binding sites for PI3-K (Y708, Y719) and for phospholipase C-gamma (Y977, Y989) in PDGF-mediated Bcr **kinase** activation. The mutant PDGF receptor Y708F/Y719F but not Y977F/Y989F showed significantly reduced Bcr **kinase** activity. To determine the role of Bcr in PDGF-mediated signal transduction events leading to ERK1/2 and its downstream Elk1 transcription activation, wild-type (WT) and **kinase**-negative (KN) Bcr were transiently **expressed** in RASMCs. Bcr WT enhanced, whereas Bcr KN inhibited, PDGF-stimulated ERK1/2 and Elk1 transcriptional activity. Overexpression of Bcr also enhanced PDGF-induced Ras/Raf-1 activity and DNA synthesis, but this regulation is independent of the **kinase** activity of Bcr. Finally, we found that Bcr **expression** was increased in the neointimal layer after balloon injury of rat carotid artery. CONCLUSIONS: These results demonstrated the importance of Bcr in PDGF-mediated events, such as activation of Ras, Raf-1, ERK1/2, and Elk1, and stimulation of DNA synthesis.

L22 ANSWER 8 OF 8 MEDLINE on STN
ACCESSION NUMBER: 97362213 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9211870
TITLE: Protein **kinase** A activation of the surfactant protein B gene is mediated by phosphorylation of thyroid transcription factor 1.
AUTHOR: **Yan C**; Whitsett J A
CORPORATE SOURCE: Children's Hospital Medical Center, Divisions of Neonatology and Pulmonary Biology, The Children's Hospital Research Foundations, Cincinnati, Ohio 45229-3039, USA.
CONTRACT NUMBER: HL38859 (NHLBI)
HL51832 (NHLBI)
SOURCE: Journal of biological chemistry, (1997 Jul 11) 272 (28) 17327-32.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199708
ENTRY DATE: Entered STN: 19970825
Last Updated on STN: 19970825
Entered Medline: 19970814

AB Thyroid transcription factor 1 (TTF-1) is a homeodomain-containing nuclear transcription factor **expressed** in epithelial cells of the lung and thyroid. TTF-1 binds to and activates the transcription of genes **expressed** selectively in the respiratory epithelium including pulmonary surfactant A, B, C and Clara cell secretory protein. Transfection with a plasmid encoding the cyclic AMP-dependent protein **kinase** (protein **kinase** A; PKA) catalytic subunit, Cat-beta, stimulated the phosphorylation of a TTF-1-flag fusion protein 6-7-fold in H441 pulmonary adenocarcinoma cells. **Recombinant** TTF-1 was phosphorylated by purified PKA catalytic subunit in the presence of [gamma-32P]ATP. PKA catalytic subunit family members, Cat-alpha and Cat-beta, markedly enhanced the transcriptional activation of surfactant B gene promoters by TTF-1 in vitro. Peptide mapping was used to identify a PKA phosphorylation site at the NH2 terminus of TTF-1. A 17-amino acid synthetic peptide comprising this site completely inhibited the PKA-dependent phosphorylation of TTF-1 in vitro. A substitution mutation of TTF-1 (Thr9 two head right arrow Ala) abolished phosphorylation by PKA and reduced transactivation of the surfactant B gene promoter. Transfection with a plasmid encoding the cAMP regulatory element binding

factor inhibited transcriptional activity of the surfactant protein B gene promoter. Phosphorylation of TTF-1 mediates PKA-dependent activation of surfactant protein B gene transcription.

=> d his

(FILE 'HOME' ENTERED AT 15:14:28 ON 07 APR 2005)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 15:14:52 ON 07 APR 2005

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L1      1303457 S KINASE?
L2       431794 S SERINE OR THREONINE
L3       107695 S L1 AND L2
L4        44729 S HUMAN AND L3
L5      7008658 S CLON? OR EXPRESS? OR RECOMBINANT
L6           23 S HUMAN (A)L1(A)L2
L7           23 DUP REM L6 (0 DUPLICATES REMOVED)
L8        26206 S L4 AND L5
L9        13226 S "CHROMOSOME 13"
L10          23 S L8 AND L9
L11          15 DUP REM L10 (8 DUPLICATES REMOVED)
L12     3112750 S LUNG OR CARCINOMA OR PLACENTA
L13        3424 S L8 AND L12
L14          12 S L6 AND L13
L15          12 DUP REM L14 (0 DUPLICATES REMOVED)
                E WEBSTER M/AU
L16         853 S E3
                E YAN C/AU
L17        1118 S E3
                E DIFRANCESCO V/AU
L18         117 S E3-E4
                E BEASLEY E/AU
L19          29 S E3
L20        2087 S L16 OR L17 OR L18 OR L19
L21          10 S L8 AND L20
L22           8 DUP REM L21 (2 DUPLICATES REMOVED)
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	L #	Hits	Search Text
1	L1	1	"6500656".pn.
2	L2	58188	kinase$2
3	L3	720777	clon$3 or express$3 or recombinant
4	L4	59489	serine or threonine
5	L5	8175	l2 same l4
6	L6	4296	(serine or threonine) adj l2
7	L7	15	human adj l6
8	L8	3307	l3 same l5
9	L9	584	"chromosome 13"
10	L10	5	l8 same l9
11	L11	93651	carcinoma or placenta or lung
12	L12	323	l8 same l11
13	L13	10	l7 and l12
14	L14	45683	WEBSTER YAN BEASLEY DIFRANCESCO
15	L15	4	l7 and l14
16	L16	281	l8 and l14
17	L17	10	l9 and l16

	Issue Date	Pages	Document ID	Title
1	20040226	259	US 20040038207 A1	Gene expression in bladder tumors
2	20040205	71	US 20040023231 A1	System for identifying and analyzing expression of are-containing genes
3	20040115	73	US 20040010136 A1	Composition for the detection of signaling pathway gene expression
4	20031113	164	US 20030211476 A1	Genetic analysis of peyer's patches and M cells and methods and compositions targeting peyer's patches and M cell receptors
5	20030911	72	US 20030172043 A1	Methods of identifying patterns in biological systems and uses thereof
6	20030123	139	US 20030017167 A1	Compositions and methods for the therapy and diagnosis of colon cancer
7	20020404	135	US 20020040127 A1	Compositions and methods for the therapy and diagnosis of colon cancer
8	20040907	68	US 6789069 B1	Method for enhancing knowledge discovered from biological data using a learning machine
9	20040706	67	US 6760715 B1	Enhancing biological knowledge discovery using multiples support vector machines
10	20040330	67	US 6714925 B1	System for identifying patterns in biological data using a distributed network
11	20021231	65	US 6500938 B1	Composition for the detection of signaling pathway gene expression
12	20020101	227	US 6335170 B1	Gene expression in bladder tumors

	Issue Date	Pages	Document ID	Title
13	20011218	87	US 6331396 B1	Arrays for identifying agents which mimic or inhibit the activity of interferons
14	20010109	32	US 6171798 B1	P53-regulated genes
15	20000201	33	US 6020135 A	P53-regulated genes

	Issue Date	Pages	Document ID	Title
1	20040812	87	US 20040156854 A1	Methods for the identification, assessment, and treatment of patients with proteasome inhibition therapy
2	20040122	146	US 20040014040 A1	Cardiotoxin molecular toxicology modeling
3	20031218	150	US 20030232421 A1	Protein-protein interactions in adipocyte cells (3)
4	20030227	122	US 20030040089 A1	Protein-protein interactions in adipocyte cells
5	20021010	21	US 20020147320 A1	Novel human kinase proteins and polynucleotides encoding the same

	Issue Date	Pages	Document ID	Title
1	20040226	259	US 20040038207 A1	Gene expression in bladder tumors
2	20040205	71	US 20040023231 A1	System for identifying and analyzing expression of are-containing genes
3	20040115	73	US 20040010136 A1	Composition for the detection of signaling pathway gene expression
4	20030123	139	US 20030017167 A1	Compositions and methods for the therapy and diagnosis of colon cancer
5	20020404	135	US 20020040127 A1	Compositions and methods for the therapy and diagnosis of colon cancer
6	20021231	65	US 6500938 B1	Composition for the detection of signaling pathway gene expression
7	20020101	227	US 6335170 B1	Gene expression in bladder tumors
8	20011218	87	US 6331396 B1	Arrays for identifying agents which mimic or inhibit the activity of interferons
9	20010109	32	US 6171798 B1	P53-regulated genes
10	20000201	33	US 6020135 A	P53-regulated genes

	Issue Date	Pages	Document ID	Title
1	20050324	89	US 20050066381 A1	Regulation of cardiac contractility and heart failure propensity
2	20050317	31	US 20050059733 A1	Anti-inflammatory and psoriasis treatment and protein kinase inhibition by hydroxy stilbenes and novel stilbene derivatives and analogues
3	20050310	18	US 20050054599 A1	Biosynthetic platform for cardioprotective stress response in human fetal heart tissue
4	20050310	155	US 20050053970 A1	Methods and compositions for identifying peptide aptamers capable of altering a cell phenotype
5	20050303	232	US 20050048490 A1	Proteins associated with cell growth, differentiation, and death
6	20050224	116	US 20050042728 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
7	20050127	44	US 20050019821 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
8	20050113	240	US 20050009876 A1	Indazole compounds, compositions thereof and methods of treatment therewith
9	20041216	250	US 20040253232 A1	Antibodies and molecules derived therefrom that bind to STEAP-1 proteins

10	20041209	45	US 20040248203 A1	Novel zwitterionic dyes for labeling in proteomic and other biological analyses

	Issue Date	Pages	Document ID	Title
11	20041209	54	US 20040247603 A1	Compositions and methods for the treatment and prevention of cancer, angiogenesis, and inflammation
12	20041209	21	US 20040247527 A1	Multifunctional photodynamic agents for treating of disease
13	20041202	75	US 20040242883 A1	Thieno[3,2-b]pyridine-6-carbonitriles and thieno[2,3-b]pyridine-5-carbonit- riles as protein kinase inhibitors
14	20041111	54	US 20040225117 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof
15	20041111	253	US 20040224323 A1	PAK5 screening methods
16	20041028	63	US 20040213794 A1	Mst1 modulation of apoptosis in cardiac tissue and modultors of Mst1 for treatment and prevention of cardiac disease
17	20041014	43	US 20040203127 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
18	20041014	103	US 20040203097 A1	Kinases and phosphatases
19	20041014	43	US 20040203009 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof
20	20040930	123	US 20040191291 A1	Composition and method for nerve regeneration

	Issue Date	Pages	Document ID	Title
21	20040930	209	US 20040191240 A1	Composition and method for nerve regeneration
22	20040916	41	US 20040180402 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof
23	20040916	458	US 20040180389 A1	Lectin compositions and methods for modulating an immune response to an antigen
24	20040909	181	US 20040176602 A1	3-Cyanoquinolines,3-cyano-1,6-naphthyridines, and 3-cyano-1,7-naphthyridines as protein kinase inhibitors
25	20040909	85	US 20040175751 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
26	20040902	106	US 20040170969 A1	GRF2 binding proteins and applications thereof
27	20040902	101	US 20040170622 A1	Methods and compositions for modulating XBP-1 activity
28	20040812	127	US 20040158879 A1	Polynucleotide and polypeptide fat metabolism regulators and uses thereof
29	20040805	53	US 20040152123 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
30	20040805	463	US 20040151728 A1	Lectin compositions and methods for modulating an immune response to an antigen

31	20040805	29	US 20040151693 A1	Use of mullerian inhibiting substance and interferon for treating tumors

	Issue Date	Pages	Document ID	Title
32	20040729	33	US 20040146978 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding human Ras-like proteins, and uses thereof
33	20040729	115	US 20040146970 A1	Proteins associated with cell growth, differentiation, and death
34	20040729	41	US 20040146463 A1	Functional MRI agents for cancer imaging
35	20040722	89	US 20040142366 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
36	20040722	51	US 20040142352 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
37	20040715	76	US 20040138251 A1	Thieno[3,2-b]pyridine-6-carbonitriles and thieno[2,3-b]pyridine-5-carbonit- riles as protein kinase inhibitors
38	20040715	17	US 20040137522 A1	Genes and proteins altering Tau-related neurodegeneration
39	20040715	111	US 20040137499 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
40	20040708	140	US 20040132043 A1	Proteins Associated with cell growth, differentiation, and death

41	20040701	130	US 20040127406 A1	Methods for in vitro expansion and transdifferentiation of human pancreatic acinar cells into insulin-producing cells

	Issue Date	Pages	Document ID	Title
42	20040701	320	US 20040126861 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
43	20040701	70	US 20040126819 A1	Glial cell line-derived neurotrophic factor receptors
44	20040701	332	US 20040126793 A1	Lectin compositions and methods for modulating an immune response to an antigen
45	20040701	456	US 20040126357 A1	Lectin compositions and methods for modulating an immune response to an antigen
46	20040624	97	US 20040121434 A1	Method and product for regulating apoptosis
47	20040610	216	US 20040110741 A1	Substituted pyrazolyl compounds for the treatment of inflammation
48	20040610	121	US 20040110180 A1	Kinases and phosphatases
49	20040610	22	US 20040110177 A1	Method for identifying functional nucleic acids
50	20040603	47	US 20040106153 A1	Novel zwitterionic fluorescent dyes for labeling in proteomic and other biological analyses
51	20040527	85	US 20040101885 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
52	20040513	207	US 20040091993 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof

	Issue Date	Pages	Document ID	Title
53	20040506	63	US 20040086926 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
54	20040429	394	US 20040083497 A1	Nucleic acids and corresponding proteins entitled 191P4D12(b) useful in treatment and detection of cancer
55	20040429	66	US 20040082772 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
56	20040422	151	US 20040077044 A1	Kinases and phosphatases
57	20040408	53	US 20040067568 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
58	20040318	209	US 20040053317 A1	Gene segregation and biological sample classification methods
59	20040318	30	US 20040053257 A1	Methods for diagnosis and treatment of psychiatric disorders
60	20040304	112	US 20040045051 A1	Tocopherol biosynthesis related genes and uses thereof
61	20040304	397	US 20040043930 A1	Novel proteins and nucleic acids encoding same
62	20040304	184	US 20040043466 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
63	20040226	9	US 20040038882 A1	Sgk2 and sgk3 used as diagnostic and therapeutic targets
64	20040226	152	US 20040038881 A1	Human kinases

	Issue Date	Pages	Document ID	Title
65	20040219	324	US 20040033495 A1	Methods of diagnosis of angiogenesis, compositions and methods of screening for angiogenesis modulators
66	20040212	238	US 20040029222 A1	Proteins and nucleic acids encoding same
67	20040212	40	US 20040029151 A1	Molecular genetic profiling of gleason grades 3 and 4/5 prostate cancer
68	20040212	245	US 20040029116 A1	Proteins and nucleic acids encoding same
69	20040205	65	US 20040023245 A1	Protein phosphatases
70	20040205	111	US 20040023244 A1	Receptors
71	20040205	144	US 20040023242 A1	Human kinases
72	20040129	234	US 20040018525 A1	Methods and compositions for the prediction, diagnosis, prognosis, prevention and treatment of malignant neoplasma
73	20040129	241	US 20040018189 A1	Nucleic acid and corresponding protein entitled 121P2A3 useful in treatment and detection of cancer
74	20040129	112	US 20040018185 A1	Human kinases
75	20040122	53	US 20040014659 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
76	20040122	62	US 20040014209 A1	Compositions and methods for modulating cell differentiation

	Issue Date	Pages	Document ID	Title
77	20040122	74	US 20040014193 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
78	20040115	431	US 20040010119 A1	Novel proteins and nucleic acids encoding same
79	20040115	49	US 20040009502 A1	Identification and tissue distribution of two novel spliced variants of the mouse LATS2 gene
80	20040108	94	US 20040005644 A1	Method and composition for detection and treatment of breast cancer
81	20040108	35	US 20040005590 A1	Isolated human RAS-like proteins, nucleic acid molecules encoding these human RAS-like proteins, and uses thereof
82	20031218	144	US 20030233670 A1	Gene sequences and uses thereof in plants
83	20031218	111	US 20030232408 A1	ISOLATED HUMAN KINASE PROTEINS
84	20031211	122	US 20030228595 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
85	20031204	58	US 20030224500 A1	Modified MEK1 and MEK2, crystal of a peptide: ligand: cofactor complex containing such modified MEK1 or MEK2, and methods of use thereof
86	20031204	186	US 20030224360 A9	Interventions to mimic the effects of calorie restriction
87	20031127	113	US 20030219862 A1	Novel compounds

	Issue Date	Pages	Document ID	Title
88	20031120	79	US 20030215916 A1	Novel imidazoline receptor homologs
89	20031120	83	US 20030215851 A1	Protein phosphatases
90	20031113	76	US 20030211141 A1	Genetic and protein manipulation of betaIG-H3 for the treatment and cure of muscular dystrophies
91	20031113	136	US 20030211093 A1	Human kinases
92	20031106	128	US 20030207311 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
93	20031106	148	US 20030207299 A1	Human kinases
94	20031030	44	US 20030204870 A1	Alteration of oil traits in plants
95	20031030	238	US 20030203372 A1	Analysis method
96	20031023	139	US 20030198975 A1	Proteins associated with cell growth, differentiation, and death
97	20031016	85	US 20030195256 A1	Inhibitors of nitric oxide synthase
98	20031002	27	US 20030186424 A1	Reagents and methods for identifying and modulating expression of genes regulated by CDK inhibitors
99	20030925	8	US 20030181351 A1	Spatial learning and memory
100	20030925	62	US 20030180330 A1	Method for identifying helicobacter antigens

	Issue Date	Pages	Document ID	Title
101	20030918	36	US 20030175830 A1	Reagents and methods for the screening of compounds useful in the treatment of neurological diseases
102	20030911	14	US 20030171429 A1	Anti-inflammatory and psoriasis treatment and protein kinase inhibition by hydroxyltilbenes and novel stilbene derivatives and analogues
103	20030911	81	US 20030171255 A1	Compositions and methods for modulation of DARPP-32 phosphorylation
104	20030904	124	US 20030166526 A1	Nucleic acid and corresponding protein named 158P1H4 useful in the treatment and detection of bladder and other cancers
105	20030904	85	US 20030166215 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
106	20030904	64	US 20030166203 A1	ISOLATED HUMAN RAS-LIKE PROTEINS, NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE PROTEINS, AND USES THEREOF
107	20030904	17	US 20030166025 A1	Antiproliferative Sgk reagents and methods
108	20030904	51	US 20030165933 A1	Regulators of apoptosis
109	20030904	66	US 20030165538 A1	Methods and compositions for developing spore display systems for medicinal and industrial applications

	Issue Date	Pages	Document ID	Title
110	20030828	167	US 20030161809 A1	Compositions and methods for the transport of biologically active agents across cellular barriers
111	20030821	41	US 20030157679 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
112	20030814	159	US 20030152926 A1	Novel methods of diagnosis of angiogenesis, compositions and methods of screening for angiogenesis modulators
113	20030731	44	US 20030143690 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
114	20030731	90	US 20030143656 A1	Protein kinase regulation
115	20030724	44	US 20030138792 A1	Compositions, kits, and methods for identification, assessment, prevention and therapy of cervical cancer
116	20030724	460	US 20030138432 A1	Selective cellular targeting: multifunctional delivery vehicles, multifunctional prodrugs, use as antineoplastic drugs
117	20030717	53	US 20030134319 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
118	20030703	186	US 20030124540 A1	Interventions to mimic the effects of calorie restriction

	Issue Date	Pages	Document ID	Title
119	20030703	23	US 20030124093 A1	Method for treating kidney disorders
120	20030626	156	US 20030119037 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
121	20030619	61	US 20030114382 A1	Glycogen synthase kinase function in endothelial cells
122	20030619	24	US 20030113762 A1	Gleason grade 4/5 prostate cancer genes
123	20030605	60	US 20030105057 A1	Methods and compositions for stimulating apoptosis and cell death or for inhibiting cell growth and cell attachment
124	20030522	61	US 20030096022 A1	Compositions and methods for the treatment and prevention of cardiovascular diseases and disorders, and for identifying agents therapeutic therefor
125	20030515	55	US 20030092066 A1	Purified Stat proteins and methods of purifying thereof
126	20030508	61	US 20030087411 A1	Death associated kinase containing ankyr in repeats (DAKAR) and methods of use
127	20030424	53	US 20030077827 A1	Surface transfection and expression procedure
128	20030424	54	US 20030077664 A1	Methods of screening for compounds that modulate hormone receptor activity

	Issue Date	Pages	Document ID	Title
129	20030327	5	US 20030060469 A1	Use of substances that act as cascade inhibitors of the raf/mek/erk signal cascade, for producing a medicament to treat dna and rna viruses
130	20030313	222	US 20030050230 A1	STE20-RELATED PROTEIN KINASES
131	20030313	81	US 20030049795 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
132	20030306	31	US 20030044946 A1	Genes, mutations, and drugs that increase cellular resistance to damage and extend longevity in organisms from yeast to humans
133	20030227	43	US 20030040050 A1	Novel protein TAB2
134	20030227	28	US 20030039957 A1	Functional protein expression for rapid cell-free phenotyping
135	20030206	185	US 20030027307 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
136	20030206	60	US 20030027304 A1	Compositions and methods for the treatment and prevention of cardiovascular diseases and disorders, and for identifying agents therapeutic therefor

137	20030206	60	US 20030026799 A1	Compositions and methods for the treatment and prevention of cardiovascular diseases and disorders, and for identifying agents therapeutic therefor

	Issue Date	Pages	Document ID	Title
138	20030130	38	US 20030022898 A1	Methods of treating inflammatory and immune diseases using inhibitors of IkappaB kinase (IKK)
139	20030130	89	US 20030022341 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
140	20030130	207	US 20030022340 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
141	20030130	53	US 20030022337 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
142	20030130	65	US 20030022284 A1	Uses of GDNF and GDNF receptor
143	20030130	41	US 20030022232 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
144	20030130	32	US 20030021750 A1	Novel functional agents for magnetic resonance imaging
145	20030102	20	US 20030003559 A1	Cell volume-regulated human kinase h-sgk
146	20021226	45	US 20020197720 A1	Surface transfection and expression procedure
147	20021219	18	US 20020192708 A1	Detection of modified amino acids by mass spectrometry
148	20021114	71	US 20020169289 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof

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149	20021024	40	US 20020156257 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
150	20021017	71	US 20020150594 A1	Methods and compositions for developing spore display systems for medicinal and industrial applications
151	20021010	42	US 20020146825 A1	Surface transfection and expression procedure
152	20021010	50	US 20020146795 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
153	20021010	58	US 20020146758 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof
154	20021003	54	US 20020142431 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
155	20021003	70	US 20020142382 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
156	20021003	42	US 20020142380 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof

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157	20020919	89	US 20020132325 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
158	20020919	184	US 20020132322 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF
159	20020919	106	US 20020132291 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
160	20020912	174	US 20020127683 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF
161	20020905	63	US 20020123121 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
162	20020829	23	US 20020120008 A1	Life extension of drosophila by a drug treatment
163	20020829	42	US 20020119920 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
164	20020829	53	US 20020119548 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
165	20020822	44	US 20020115172 A1	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof

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166	20020822	114	US 20020115171 A1	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
167	20020711	30	US 20020090647 A1	Reagents and methods for the screening of compounds useful in the treatment of neurological diseases
168	20020704	63	US 20020086391 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEROF
169	20020627	320	US 20020082189 A1	ISOLATED HUMAN SERINE/THREONINE KINASE NUCLEIC ACID MOLECULES ENCODING HUMAN SERINE/THREONINE KINASE AND USES THEREOF
170	20020620	52	US 20020076783 A1	Plants and plants cells expressing histidine tagged intimin
171	20020530	203	US 20020064855 A1	Genes that regulate hematopoietic blood forming stem cells and uses thereof
172	20020530	44	US 20020064843 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
173	20020509	97	US 20020055130 A1	Method and product for regulating apoptosis
174	20020502	52	US 20020051980 A1	Methods for modulating the activation of a lymphocyte expressed G protein coupled receptor involved in cell proliferation, autoimmunity and inflammation

175	20020411	62	US 20020042926 A1	Ovary-specific genes and proteins

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176	20020411	23	US 20020042499 A1	Novel inhibitor of the inflammatory response induced by TNF-alpha and IL-1
177	20020411	40	US 20020042114 A1	Novel human protein kinases
178	20020328	26	US 20020037531 A1	Expression cloning of protein targets for phospholipids
179	20020228	172	US 20020026052 A1	3-cyanoquinolines, 3-cyano-1,6-naphthyridines, and 3-cyano-1,7-naphthyridines as protein kinase inhibitors
180	20020221	39	US 20020022589 A1	Scytonemin and methods of using thereof
181	20011115	28	US 20010041731 A1	Scytonemin and methods of using thereof
182	20011004	15	US 20010027184 A1	Serine/threonine protein kinase (H-SGK2)
183	20050322	35	US 6869956 B2	Methods of treating inflammatory and immune diseases using inhibitors of I.kappa.B kinase (IKK)
184	20050315	40	US 6867019 B2	Isolated human ras-like proteins, nucleic acid molecules encoding these human ras-like proteins, and uses thereof
185	20050315	18	US 6867005 B2	Method and apparatus for increasing the dynamic range and accuracy of binding assays
186	20050308	40	US 6864355 B1	Inhibition of NF-.kappa.B activation by blockade of IKK.beta.-NEMO interactions at the NEMO binding domain

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187	20050301	17	US 6861240 B2	Human kinases and polynucleotides encoding the same
188	20050222	65	US 6858383 B2	Compositions and methods for the treatment and prevention of cardiovascular diseases and disorders, and for identifying agents therapeutic therefor
189	20050215	20	US 6855520 B2	Cell volume-regulated human kinase h-sgk
190	20050111	14	US 6841578 B2	Treatment and prevention of mucositis in cancer patients
191	20041228	60	US 6835562 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
192	20041214	50	US 6831065 B2	Anti-inflammatory compounds and uses thereof
193	20041214	39	US 6830911 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
194	20041123	179	US 6821765 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
195	20041102	29	US 6811992 B1	Method for identifying MLK inhibitors for the treatment of neurological conditions
196	20041019	23	US 6806060 B2	Methods for the identification of inhibitors of threonine synthase as antibiotics
197	20041005	29	US 6801860 B1	Crystal structure of cPLA2 and methods of identifying agonists and antagonists using same

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198	20040928	17	US 6797510 B1	Human kinases and polynucleotides encoding the same
199	20040810	68	US 6773904 B2	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
200	20040810	72	US 6773705 B1	Methods for diagnosing and treating autoimmune disease
201	20040706	47	US 6759221 B1	14189, a novel human kinase and uses thereof
202	20040601	61	US 6743904 B2	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
203	20040525	81	US 6740513 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
204	20040511	43	US 6733992 B2	Isolated human Ras-like proteins, nucleic acid molecules encoding these human Ras-like proteins, and uses thereof
205	20040511	50	US 6733978 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
206	20040504	96	US 6730506 B2	Isolated human kinase proteins
207	20040413	50	US 6720154 B1	Purified stat proteins and methods of purifying thereof

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208	20040323	58	US 6709830 B2	Methods for modulating the activation of a lymphocyte expressed G protein coupled receptor involved in cell proliferation, autoimmunity and inflammation
209	20040316	106	US 6706511 B2	Isolated human kinase proteins
210	20040316	85	US 6706510 B2	Isolated human kinase proteins
211	20040224	70	US 6696259 B1	Assays using glial cell line-derived neurotrophic factor receptors
212	20040217	66	US 6692948 B2	Isolated human kinase proteins
213	20040210	140	US 6689772 B1	3-cyanoquinolines, 3-cyano-1,6-naphthyridines, and 3-cyano-1,7-naphthyridines as protein kinase inhibitors
214	20040203	50	US 6686176 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
215	20040203	54	US 6685938 B1	Methods and compositions useful for modulation of angiogenesis and vascular permeability using SRC or Yes tyrosine kinases
216	20040120	202	US 6680188 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
217	20040120	249	US 6680170 B2	Polynucleotides encoding STE20-related protein kinases and methods of use
218	20040106	31	US 6673333 B1	Functional MRI agents for cancer imaging

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219	20031230	60	US 6670162 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
220	20031216	81	US 6664085 B2	Isolated human calcium/calmodulin (CaMk) dependent kinase proteins
221	20031202	248	US 6656716 B1	Polypeptide fragments of human PAK5 protein kinase
222	20031125	180	US 6653117 B2	Isolated human kinase proteins
223	20031111	28	US 6645728 B2	Inhibitor of the inflammatory response induced by TNF.alpha. and IL-1
224	20031028	78	US 6638745 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
225	20031021	31	US 6635802 B1	Nuclear transfer using cells cultured in serum starvation media containing apoptosis inhibitors
226	20031007	50	US 6630337 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
227	20030923	37	US 6624154 B1	Compositions and methods for treatment of hyperproliferative diseases
228	20030909	55	US 6617171 B2	Methods for diagnosing and treating autoimmune disease
229	20030909	46	US 6617117 B1	MAP kinases: polypeptides, polynucleotides and uses thereof
230	20030812	18	US 6605589 B1	Cathepsin inhibitors in cancer treatment

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231	20030701	95	US 6586185 B2	Use of polypeptides or nucleic acids for the diagnosis or treatment of skin disorders and wound healing and for the identification of pharmacologically active substances
232	20030429	41	US 6555352 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
233	20030218	159	US 6521618 B2	3-cyanoquinolines, 3-cyano-1,6-naphthyridines, and 3-cyano-1,7-naphthyridines as protein kinase inhibitors
234	20030218	18	US 6521456 B1	Cellular transport system for the transfer of a nucleic acid through the nuclear envelope and methods thereof
235	20030128	80	US 6511800 B1	Methods of treating nitric oxide and cytokine mediated disorders
236	20030107	62	US 6504007 B1	GDNF receptor
237	20021231	86	US 6500656 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
238	20021217	38	US 6495588 B2	Scytonemin and methods of using thereof
239	20021217	28	US 6495586 B2	Scytonemin and methods of using thereof
240	20021210	107	US 6492156 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof

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241	20021210	180	US 6492155 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
242	20021119	46	US 6482935 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
243	20021112	202	US 6479269 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
244	20021015	34	US 6465618 B1	Mitogen activated protein kinase (MAPK) kinase
245	20020924	50	US 6455291 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
246	20020910	22	US 6448086 B1	Insulin-like growth factor system and cancer
247	20020813	90	US 6432914 B1	Beclin and uses thereof
248	20020730	60	US 6426206 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
249	20020709	18	US 6416759 B1	Antiproliferative Sgk reagents and methods
250	20020618	151	US 6406853 B1	Interventions to mimic the effects of calorie restriction
251	20020611	82	US 6403353 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof

252	20020514	85	US 6387677 B1	Nucleic acid molecules encoding human calcium/calmodulin (CaMK) dependent kinase proteins

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253	20020507	35	US 6384204 B1	Reagents and methods for the screening of compounds useful in the treatment of neurological diseases
254	20020122	88	US 6340583 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
255	20011225	125	US 6333170 B1	Method and product for regulating cell responsiveness to external signals
256	20011218	87	US 6331396 B1	Arrays for identifying agents which mimic or inhibit the activity of interferons
257	20011204	19	US 6326181 B1	Cell volume-regulated human kinase h-sgk
258	20011106	102	US 6312934 B1	Human MEKK proteins, corresponding nucleic acid molecules, and uses therefor
259	20010731	34	US 6268216 B1	Reagents and methods for the screening of compounds useful in the treatment of neurological diseases
260	20010724	26	US 6265538 B1	Inhibitor of the inflammatory response induced by the TNFA and IL-1
261	20010717	128	US 6261786 B1	Screening assays for hedgehog agonists and antagonists
262	20010522	26	US 6235891 B1	Glucocorticoid receptor agonist and decreased PP5
263	20010515	38	US 6232077 B1	Human protein kinases
264	20010515	122	US 6232061 B1	Homology cloning
265	20010227	34	US 6194187 B1	Apoptosis-inducing protein and gene encoding the same

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266	20001024	74	US 6136581 A	Kinase genes and uses
267	20000404	46	US 6045792 A	Human proteins kinases
268	20000229	50	US 6030780 A	Purified Stat proteins and methods of purifying thereof
269	19991109	95	US 5981265 A	Methods for regulating MEKK protein activity
270	19991102	46	US 5977442 A	Salicylic acid induced map kinase and its use for enhanced disease resistance in plants
271	19990608	69	US 5910426 A	Protein tyrosine kinase
272	19990126	47	US 5863780 A	Human Protein Kinases
273	19990119	95	US 5861239 A	Methods for identifying compounds that modulate mammalian tub protein activity
274	19981222	67	US 5852184 A	Protein tyrosine kinase
275	19981208	51	US 5846800 A	Nucleic acid molecules encoding a novel receptor-type protein tyrosine phosphatase-.sigma.
276	19981124	50	US 5840842 A	Receptor-type phosphotyrosine phosphatase-sigma
277	19981013	71	US 5821069 A	Method for determining tyrosine kinase in a sample
278	19980609	16	US 5763244 A	Method for cloning and expression of phosphorylation-dependent protein kinase
279	19980519	49	US 5753446 A	Mitogen ERK kinase kinase (MEKK) assay
280	19980210	68	US 5716818 A	Protein tyrosine kinase

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281	19970819	70	US 5658791 A	Antibodies which specifically bind to proteins having tyrosine kinase activity, wherein said proteins have more than one tyrosine kinase domain, and no SH2 domains

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1	20040902	106	US 20040170969 A1	GRF2 binding proteins and applications thereof
2	20040722	89	US 20040142366 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
3	20040701	332	US 20040126793 A1	Lectin compositions and methods for modulating an immune response to an antigen
4	20040422	151	US 20040077044 A1	Kinases and phosphatases
5	20040205	144	US 20040023242 A1	Human kinases
6	20040115	49	US 20040009502 A1	Identification and tissue distribution of two novel spliced variants of the mouse LATS2 gene
7	20040108	35	US 20040005590 A1	Isolated human RAS-like proteins, nucleic acid molecules encoding these human RAS-like proteins, and uses thereof
8	20030130	89	US 20030022341 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
9	20040316	85	US 6706510 B2	Isolated human kinase proteins
10	20021231	86	US 6500656 B1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof